Appendix F

FINANCE

May, 2001

2001 RTP Technical Appendix

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FINANCE

Introduction

Today's era of transportation finance is characterized by intense competition among various transportation needs for a limited amount of revenues. The infrastructure impacts from continued population growth and congestion have outpaced the available funds necessary to fully restore the transportation system. In addition, environmental considerations have remained a challenge in the region's ability to improve mobility. Clearly, there is a fine balancing act that must be accomplished to meet mobility objectives.

SCAG, as the federally designated MPO, is required to prepare a long range financial plan for the RTP which must be fiscally constrained. The financial plan must demonstrate how the RTP can be implemented, identify funding sources that can be "reasonably available" over the plan period, and recommend innovative financing strategies and mechanisms for meeting revenue shortfalls.

Since the adoption of the 1998 RTP, several major legislative actions occurred which directly impacted the rules and regulations within the context of the financial plan update. Major legislation included the passage of the Federal Transportation Equity Act for the 21st Century, also known as TEA-21, and the passage of State Senate Bill 45. The enactment of SB 45 reformed the transportation programming process by consolidating certain programs while empowering regional governments to solely select 75 percent of the transportation improvement projects. The new law also requires that the financial element of an RTP be constrained but allow recommendations for the development of new revenues.

In addition, the inclusion of new assumptions significantly impacted the financial plan's outcome. These assumptions included the implementation and cost implications of the MTA consent decree and the undertaking of a comprehensive review of the operations, maintenance and rehabilitation costs of the SCAG region's transit and roadway network.

The financial section of the technical appendix outlines the specific issues and methodologies considered in developing the 2001 RTP financial plan. The financial section is divided into several major components, each describing in detail the data elements that contributed to the development of the financial plan. The major components of this appendix section include:

1. Long term trends in transportation funding.
2. Revenue sources and assumptions
3. Capital, operations and maintenance expenditures
4. Alternative funding options
5. Funding strategy

Additionally, this section of the appendix includes information on the assumptions used to calculate costs for the transit corridors and highway projects proposed in both the constrained and unconstrained list of projects.

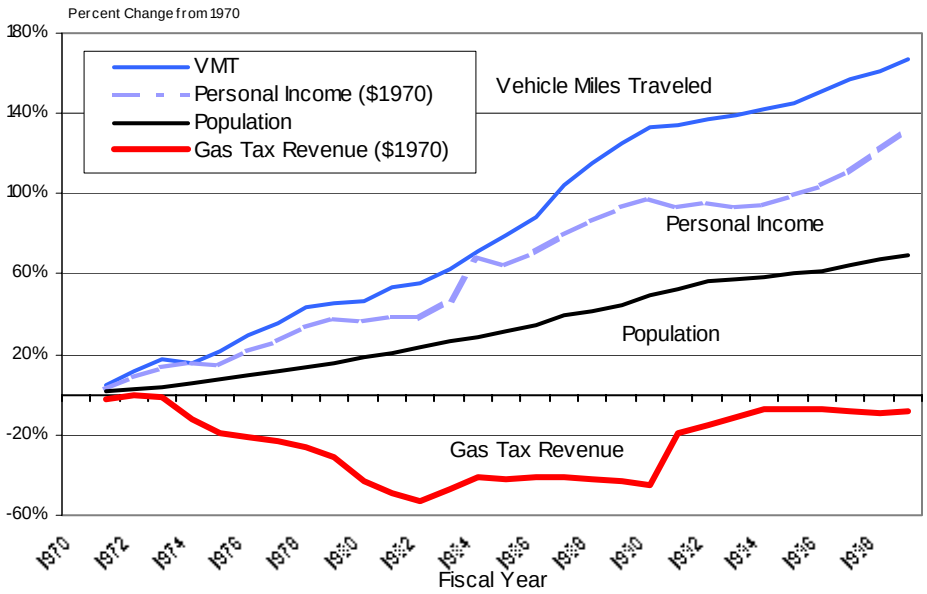
Long Term Trends in Transportation Funding

Before venturing into the financial plan, it was necessary to establish a framework within which the financial plan was prepared. The framework provides for the general trends and conditions surrounding the revenues that are part of the financial plan. The subject of transportation finance could first be described by way of the growth trends in some of California's primary transportation funding sources in relation to the growth in important economic and social factors such as population, vehicle miles traveled (VMT) and personal income.

As the following graphs show, historically transportation revenues have lagged the growth in population, VMT and personal income. On a constant year's basis, the three factors have outpaced transportation funding in significant proportions. In fact, using 1970 as the base year, the relative purchasing power of state gas tax revenues since 1970 have not reached the level attained in 1970, even with the doubling of the tax starting in 1991 (see Graph 1). Only since the advent of local transportation sales taxes have the revenues been above the 1970 purchasing level (Graph 2). However, it is expected that the trend in transportation revenues exceeding the 1970 base year's purchasing power will be reversed due to the expiration of local transportation sales taxes over the next decade.

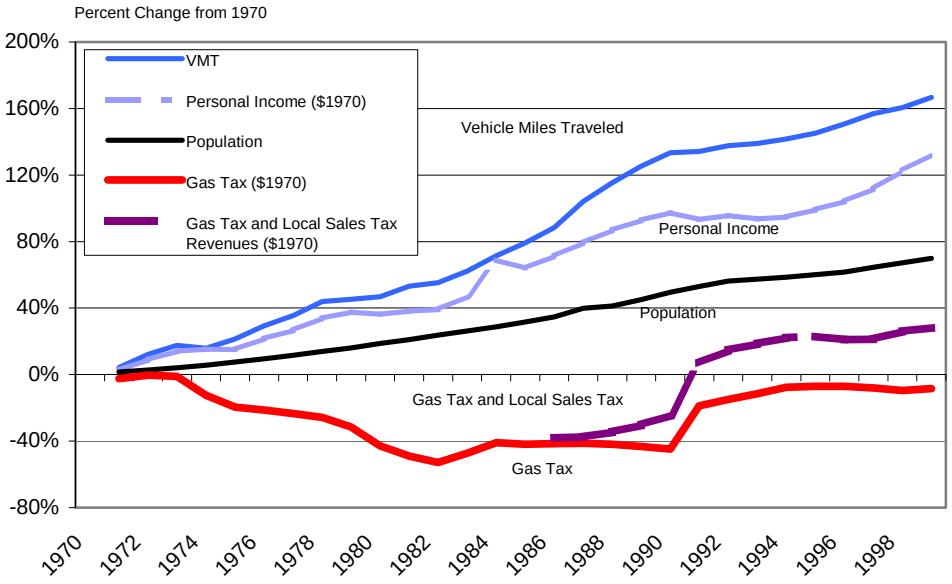
Graph 1

Percentage Change in VMT, Personal Income, Population and Gas Tax Revenue Since 1970 Statewide Totals



Graph 2

Percentage Change in VMT, Personal Income, Population Gas Tax Revenue and Local Sales Taxes Since 1970 Statewide Totals



Comparison of California's Gas Tax Rates and Revenues to Other States

Another dimension to the framework for the RTP financial plan is the relationship of California's funding sources in relation to those in other states. One key revenue source, the state gas tax, is a fundamental revenue source for transportation projects in just about every state. California's excise gas tax rate is currently 18 cents per gallon. Several factors contribute to the amount of gas tax revenues that a state collects. Certainly the state's gas tax rate, its population, number of registered vehicles and annual vehicle miles traveled are all factors in the total amount of gas tax revenues. Table 1 ranks the states (including the District of Columbia) by the amount of revenues collected in 1997. California ranks first in revenue collected and Texas ranks second, although Texas' gas tax is two cents higher than California's.

However, in comparing just the state gas tax rates, California ranks 38th out of 51 as shown in Table 2. Connecticut imposes a 36 cents per gallon gas tax, the highest state gas tax in the country, while Georgia imposes the lowest tax at 7.5 cents per gallon. On a gas tax revenue per capita basis, California ranks 44th in the nation with a gas tax revenue per capita equal to $87.40 (Table 3). Montana, with the third highest state gas tax in the country in 1997, ranks first on a per capita basis with collections equaling $192.60 per person.

State gas tax revenues are also compared on the basis of per registered driver. As shown in Table 4, California ranks 42nd with revenues equivalent to $138.40 per registered driver. Montana leads the nation again with gas tax revenues of $255.50 per registered driver. Judging from these statistics, although California collected the most gas tax revenues in 1997, its tax rate and revenues on a population or registered driver basis do not rank high compared to those in other states. These statistics demonstrate the limited resources that are available to transportation in California as well as the SCAG region.

Table 1

Comparison of California Gas Tax Revenues to Those of Other States Rank from Highest Revenues Generated to Lowest for 1997

Rank	State	Gas Tax Revenues ($thous.)	Rank	State	Gas Tax Revenues ($thous.)
1	**California**	$ 2,820,580	26	South Carolina	$ 389,625
2	Texas	2,414,996	27	Georgia	386,559
3	Pennsylvania	1,531,832	28	Oregon	385,878
4	New York	1,400,162	29	Iowa	382,334
5	Florida	1,391,789	30	Oklahoma	382,312
6	Ohio	1,371,882	31	Arkansas	351,117
7	Illinois	1,127,878	32	Mississippi	334,027
8	North Carolina	974,658	33	Kansas	311,219
9	Michigan	821,330	34	Nebraska	281,610
10	Virginia	732,128	35	West Virginia	270,784
11	Washington	699,989	36	Nevada	268,042
12	Wisconsin	697,936	37	Utah	260,683
13	Indiana	694,961	38	New Mexico	230,760
14	Tennessee	670,104	39	Idaho	198,266
15	Missouri	629,617	40	Montana	169,224
16	Maryland	620,834	41	Maine	154,266
17	Massachusetts	597,974	42	Rhode Island	124,651
18	Connecticut	544,342	43	New Hampshire	122,688
19	Alabama	539,922	44	South Dakota	103,163
20	Minnesota	536,359	45	Delaware	103,157
21	Louisiana	499,278	46	North Dakota	95,074
22	Arizona	498,220	47	Vermont	70,532
23	New Jersey	487,547	48	Hawaii	68,677
24	Colorado	442,253	49	Wyoming	53,884
25	Kentucky	406,004	50	Dist. of Columbia	32,529
			51	Alaska	18,749

Source: Federal Highway Administration

Table 2

Rank of Highest State Gas Tax Rates to Lowest for 1997

Rank	State	Tax (Cents)		Rank	State	Tax (Cents)
1	Connecticut	36.0		26	Tennessee	20.0
2	Rhode Island	29.0		27	Texas	20.0
3	Montana	27.0		28	Vermont	20.0
4	Pennsylvania	25.9		29	Illinois	19.0
5	West Virginia	25.4		30	Maine	19.0
6	Idaho	25.0		31	Michigan	19.0
7	Nevada	24.8		32	New Mexico	18.9
8	Nebraska	24.5		33	New Hampshire	18.7
9	Utah	24.5		34	Arkansas	18.6
10	Oregon	24.0		35	Mississippi	18.4
11	Wisconsin	23.8		36	Alabama	18.0
12	Maryland	23.5		37	Arizona	18.0
13	Delaware	23.0		38	**California**	18.0
14	Washington	23.0		39	Kansas	18.0
15	New York	22.8		40	Virginia	17.5
16	North Carolina	22.6		41	Missouri	17.0
17	Colorado	22.0		42	Oklahoma	17.0
18	Ohio	22.0		43	Kentucky	16.4
19	Massachusetts	21.0		44	Hawaii	16.0
20	South Dakota	21.0		45	South Carolina	16.0
21	Dist. of Columbia	20.0		46	Indiana	15.0
22	Iowa	20.0		47	Florida	12.8
23	Louisiana	20.0		48	New Jersey	10.5
24	Minnesota	20.0		49	Wyoming	9.0
25	North Dakota	20.0		50	Alaska	8.0
				51	Georgia	7.5

Source: Federal Highway Administration

Table 3

Comparison of Gas Tax Revenues Per Capita for 1997

Rank	State (Highest Revenues Per Capita to Lowest)		Rank	State (Highest Revenues Per Capita to Lowest)	
1	Montana	$ 192.6	26	Kansas	119.9
2	Nebraska	170.0	27	Vermont	119.8
3	Connecticut	166.5	28	Oregon	119.0
4	Idaho	163.8	29	Indiana	118.5
5	Nevada	159.9	30	Missouri	116.6
6	West Virginia	149.1	31	Oklahoma	115.3
7	North Dakota	148.3	32	Louisiana	114.7
8	Delaware	141.0	33	Minnesota	114.5
9	South Dakota	139.8	34	Colorado	113.6
10	Arkansas	139.2	35	Wyoming	112.3
11	Wisconsin	135.0	36	Arizona	109.4
12	Iowa	134.0	37	Virginia	108.7
13	New Mexico	133.4	38	New Hampshire	104.6
14	North Carolina	131.3	39	Kentucky	103.9
15	Pennsylvania	127.4	40	South Carolina	103.6
16	Utah	126.6	41	Massachusetts	97.7
17	Rhode Island	126.2	42	Florida	95.0
18	Alabama	125.0	43	Illinois	94.8
19	Tennessee	124.8	44	**California**	87.4
20	Washington	124.8	45	Michigan	84.0
21	Maine	124.2	46	New York	77.2
22	Texas	124.2	47	Dist. of Col.	61.5
23	Ohio	122.6	48	New Jersey	60.5
24	Mississippi	122.3	49	Hawaii	57.9
25	Maryland	121.9	50	Georgia	51.6
			51	Alaska	30.8

Table 4

Comparison of Gas Tax Revenues Per Registered Driver for 1997

Rank	State (Highest Revenues Per Driver to Lowest)		Rank	State (Highest Revenues Per Driver to Lowest)	
1	Montana	$ 255.5	26	Tennessee	170.6
2	Connecticut	239.8	27	Kansas	170.5
3	Nebraska	238.9	28	Oregon	169.5
4	Idaho	234.9	29	Missouri	168.2
5	Nevada	226.0	30	Oklahoma	167.8
6	West Virginia	210.7	31	Ohio	167.6
7	North Dakota	210.3	32	Arizona	159.7
8	South Dakota	196.8	33	Alabama	159.4
9	Iowa	195.8	34	Kentucky	157.7
10	Mississippi	193.9	35	Colorado	155.9
11	New Mexico	193.2	36	Wyoming	152.7
12	Delaware	192.6	37	Virginia	149.4
13	Utah	192.1	38	South Carolina	149.1
14	Wisconsin	190.0	39	Vermont	148.4
15	Minnesota	188.9	40	Illinois	146.6
16	Texas	188.2	41	New Hampshire	138.9
17	Arkansas	186.9	42	**California**	138.4
18	Louisiana	186.4	43	Massachusetts	136.1
19	Maryland	185.5	44	New York	133.0
20	Pennsylvania	184.2	45	Michigan	121.7
21	Rhode Island	183.3	46	Florida	118.5
22	North Carolina	180.5	47	Hawaii	92.9
23	Indiana	177.1	48	Dist. of Col.	91.3
24	Washington	174.6	49	New Jersey	87.4
25	Maine	171.2	50	Georgia	76.3
			51	Alaska	42.0

RTP Financial Plan

The RTP financial plan was developed through the guidance provided by the SCAG Long Range Transportation Finance Task Force. The Task Force, composed of locally elected officials and staff from local transportation agencies, was responsible for preparing the update to the financial plan and addressing the various issues and options that could impact the plan. The Task Force also worked jointly with other SCAG task forces that were responsible for other portions of the RTP.

Financial analysis was conducted for both revenues and expenditures. As a way to evenly compare the anticipated revenues with cost estimates projected during different time frames, all of the data was adjusted to a common base year. This enabled the data to be expressed in a common year that allows for even comparisons between and among the revenues and costs. The base year chosen was 1997 to remain internally consistent with SCAG's planning models. A three (3) percent de-escalation factor, adopted by the Finance Task Force, was used to convert the anticipated revenues and costs to constant 1997 dollars. The 1998 RTP had used a 3 percent de-escalation rate to adjust the revenues and costs in that plan to constant 1995 dollars. To remain consistent with this assumption in updating the financial plan, the 3 percent rate was adopted.

A regional revenue model was developed to forecast the revenues during the long-range time horizon of the plan. The revenue model provided a detailed forecast that can allow for analysis on a county by county basis or by funding source. The data could be summarized for the full plan period or in a particular time increment, such as in five-year increments. The Finance Task Force approved the financial assumptions that factored into the model. The model also took into account external influences that could affect the level and predictability of the revenue streams, such as air quality regulations and vehicle technology, legislative initiatives, electronic commerce and economic factors.

Revenue Sources

The revenues identified are those that have been providing for the building, operations, and maintenance of the current roadway and transit systems in the region. The regional revenues are from traditional local, state and federal sources. [1]

The traditional funding sources identified in this section do not add up to the total costs required to implement all significant projects that will improve mobility. However, the revenues provide a benchmark from which additional funding could be identified. The assumptions governing the revenues are described in detail, along with the general conditions guiding the revenue forecast. Alternative financing methods and strategies are considered and discussed in a later part of this section.

[1] Local gas tax subventions are not included as a revenue source, assuming that the subventions are not used for "regionally significant" projects. The EPA's use of the term "regionally significant" is intended to include those transportation projects that would have significant impacts on regional travel, emissions and air quality.

The traditional funding sources include the following:

Local

- Transportation Development Act
- County transportation sales taxes
- Transit fares
- Local agency funds (public and private) [2]
- Miscellaneous funds [3]

State

- State Transportation Improvement Program, Regional share
- State Transportation Improvement Program, Interregional share
- State Transit Assistance
- Transit Capital Improvement/Proposition 116
- State Highway Operations and Protection Plan/Operations and Maintenance
- The Governor's Traffic Congestion Relief Plan [4]

Federal

- Regional Surface Transportation Program
- Congestion Mitigation and Air Quality
- Local Assistance [5]
- Section 5307 (transit) [6]
- Section 5309 (transit)

[2] Includes Orange County Gasoline Tax Fund; Transportation Corridor Agencies toll revenues in Orange County; and local agency contributions to committed projects.

[3] Includes transit advertisement and auxiliary revenues, lease revenues and interest and investment earnings on cash balances for programs such as Measure sales tax programs.

[4] This baseline revenue forecast includes revenues from the Governor's Traffic Congestion Relief Plan. AB 2928 (Torlakson), SB 1662 (Burton), and SB 406 (Ortiz) commit approximately $8.2 billion in new transportation funding statewide from (2000-01 to 2005-06). Of this amount, approximate $5 billion is expected to fund the Governor's Traffic Congestion Relief Plan. The SCAG Region would receive approximately $2.3 billion for TCRP projects.

[5] Includes programs such as Regional Transportation Enhancements, Highway Bridge Rehabilitation, grade crossings and hazard elimination. Also includes Federal High Priority Projects for the region, other federal funds for specific projects (e.g. Alameda Corridor) and MTA clean fuels program.

[6] Includes Section 5311 (rural operating) funds for Imperial and Riverside Counties.

Assumptions Governing the Revenue Forecast

TEA-21

A significant event between the development of the 1998 RTP and the 2001 RTP was passage of the Federal Transportation Equity Act for the 21st Century, or TEA-21. To carry on the programs and funding streams provided by the former ISTEA, Congress in 1998 enacted TEA-21, which authorizes over $217 billion nationwide from 1998 through 2003, a 40 percent funding increase over ISTEA. The additional funding is generated in part from Congress redirecting the 4.3 cents of federal gas tax back to transportation that was previously used for federal deficit reduction.

Annual federal apportionment to California is about $2.3 billion, which is divided by the state share, approximately $1.3 billion per year, and local assistance, approximately $831 million per year. As a result of the increase, additional funding was realized through the STIP process, with the SCAG region receiving approximately $500 million in additional federal dollars between 1998 and 2004.

Most of the programs contained in ISTEA are intact in TEA-21, including the Congestion Mitigation and Air Quality program and the Surface Transportation Program. Among the new grant programs in TEA-21 is the clean fuels formula grant program in which MTA would receive a clean fuel bus grant in the amount of $13.3 million over 6 years. In addition, TEA-21 created innovative programs to help fund major transportation projects of national significance.

Expiration of the Local Transportation Sales Tax

In the SCAG region, four counties including Imperial, Orange, Riverside, and San Bernardino are considered "self-help" counties. Voters of these counties approved special (½ percent) local sales tax measures dedicated to transportation expenditures for a limited time period. These local transportation sales taxes are scheduled to expire over the next ten years in each of these counties. Currently, Ventura County does not impose such a tax and Los Angeles County levies a permanent 1 percent tax (a combination of two ½ percent tax initiatives, Propositions A & C).

These taxes are in addition to the sales and use tax levied statewide, and are generally imposed upon the same transactions and items subject to the statewide sales and use tax, namely the sale of tangible personal property and storage or use/consumption within particular jurisdictions.

The local transportation sales tax underscores the importance of local funding generally in financing transportation investments throughout the SCAG region. In fact, the most significant source of revenue for the region is local. Local funding accounts for 70 percent of the $100 billion forecasted as being available for transportation investments in the region. As a result of a State Supreme Court decision, however, a two-thirds approval by county voters is required to re-authorize the taxes in Imperial, Orange, Riverside and San Bernardino Counties. This threshold has proven to be attainable, though, with two northern California counties recently reauthorizing their respective local transportation sales taxes with a greater than two-thirds voter approval.

Possible Market Penetration of Alternative Fuel Vehicles Could Limit State and Federal Gas Tax Revenue Growth

SCAG recognizes the possibility that technological improvement, in addition to emission budget requirements, may result in a motor vehicle fleet that would consume less gasoline and/or rely on alternative energy sources. The market penetration of alternative fuel vehicles, in addition to more fuel-efficient vehicles, if they come to pass, would erode the revenues generated by gasoline sales and diminish the gas tax as a reliable source of revenue. Further study is needed to assess the penetration rate, and in turn the impacts on transportation revenues.

In relative terms, the growth in the use of gasoline has been declining over the last three decades. Between 1970 and 1997 vehicle miles traveled statewide increased 143 percent (from 117 billion to 285 billion miles) while the gallons of gasoline sold grew 70 percent (from 9.4 billion to 16.0 billion gallons). This shows that growth in travel exceeded the growth in gasoline sales by more than two times. California's population during that period, for comparison, grew by 63 percent.

It is a further possibility that the California Air Resources Board's (CARB's) policies and the SIP requirements regarding the introduction of alternative fuels could substantially accelerate the divergence between the increase in travel and the use of gasoline.

A shift away from vehicles with internal combustion engines fueled by gasoline would likely occur over the next ten years. This means a transition from gasoline vehicles to cleaner burning alternative fueled vehicles. Alternative fuels would include electric, compressed natural gas (CNG), methanol and fuel cells.

As part of the strategies to improve air quality, automakers have also offered a line-up of vehicles that still consume gasoline, but are cleaner burning and the emissions are less than the traditional gas engine. These vehicles include Ultra Low Emission Vehicles (ULEVs), Super Ultra Low Emission Vehicles (SULEVs) and hybrids that combine both gasoline and electricity for energy.

One major issue regarding the switch to alternative fuels is the potential loss in gasoline tax revenues, both the state and federal per gallon excise taxes and the sales taxes that are applied to gasoline. Since state and federal gasoline taxes would be lost from the shift to alternative fuels, several traditional revenue sources in the revenue model would be affected. The following traditional revenue sources would be affected from the forecasted loss in gasoline consumption:

1. State Transportation Improvement Program
2. State Highway Operations Protection Plan
3. Regional Surface Transportation Program
4. Congestion Mitigation and Air Quality Program
5. Federal Local Assistance
6. Federal Transit Administration Funds
7. State Transit Assistance

8. Transit Development Act
9. Local Sales Tax

The degree of impact is dependent on each revenue source's reliance on gasoline taxes. Full impact would occur in Los Angeles County, Orange County, Riverside County and San Bernardino County. Reduced impacts would occur in Ventura County and Imperial County since these two counties technically are not a part of the South Coast Air Basin (SCAB), but are assumed to feel some effects from the loss of gasoline taxes in the region.

Most Impact

The funding sources that have either the state or federal gasoline excise tax as their primary revenue stream incur the greatest impact from the conversion of vehicles to alternative fuels. These revenue sources include the state STIP and SHOPP, and the federal RSTP, CMAQ and Local Assistance programs. This assumption would apply to the affected funding sources in the revenue model starting in 2010 through the remaining RTP time horizon.

Prior to 2010, assumptions were made that funding sources would be affected in phases, in a ramp up approach. This assumes the gradual and continuous introduction of alternative fuel vehicles into the overall fleet, which would result in the gradual reduction in gasoline taxes.

Lesser Impact

Federal Transit Administration funds (e.g., FTA Section 5307, 5309 and 5311) would also be impacted by the loss in federal gasoline taxes. However, federal general fund monies are anticipated to continue to contribute approximately 30 percent to transit funding under TEA-21. Therefore, the impacts are assumed to not be as severe. Based on the proportion of federal gas tax revenues that fund federal transit programs, plus the assumed rate of gasoline reduction from alternative fuels, the transit revenues would be adjusted.

Also, the State Transit Assistance program would be affected by the reduction in gas taxes, but also at an assumed lesser rate. The STA program has two primary revenue streams, one being sales tax revenues generated from the state sales tax that is applied to a portion of the state gas excise tax, and the other being state sales tax revenues generated from diesel fuel sales.

Lastly, Transportation Development Act and Local Sales Tax revenues would be affected due to the assumed loss in sales tax revenues from the reduction in gallons consumed. Based on the State Controller Annual Report, service station tax revenues currently make up about 8 percent of total sales tax revenue. An assumption was also made that 85 percent of the service station revenues are derived from gasoline sales. TDA and local sales tax revenues would be adjusted based on these assumptions.

Ventura County and Imperial County are technically not in the South Coast Air Basin where the air quality impacts are proposed. However, it is assumed that the potential loss in gasoline tax revenues in the Los Angeles basin would have an impact on the state's overall gasoline tax revenue pot, thereby affecting the other counties' funding statewide. Not all gas tax revenues

generated in the SCAB are returned to source, with the leakage of revenues being distributed to the other counties through state transportation formulas and from state policy decisions. It is assumed, then, that Ventura and Imperial County revenues in the forecast would be impacted from alternative fuel penetration, but to a lesser degree.

SCAG recognizes that the impacts on transportation revenues due to alternative fuel vehicles would depend on the actual market penetration rate. Over the past few years, the penetration of alternative fueled vehicles through 2025, has been estimated within a wide range as rules set forth by the SCAQMD's Air Quality Management Plan and the California Air Resources Board have been implemented or revised. To address this range, the RTP assumes that revenue shortfalls from decreased gasoline consumption could be made up by means of a revenue raising mechanism applied to alternative fuels. Alternative fuel vehicle users would then contribute to supporting and maintaining the transportation system they are using. If the penetration rate were to be as low as 2-5 percent as currently estimated by CARB, gasoline tax revenue loss would be minimal, not necessitation a revenue raising mechanism on alternative fuel vehicles. Should the penetration rates go above this range, a revenue raising mechanism would be needed to pay for maintaining the existing transportation system and building new RTP projects (through the year 2025). The 2001 RTP proposes $144 billion to maintain and build new projects. With either penetration scenario, SCAG's financial strategy (as further discussed in a later section) identifies and sufficiently covers the needed $144 billion.

In adopting the 2001 RTP, the Regional Council recognizes that a revenue raising mechanism on alternative fuels would be under further study with the option to implement should the penetration sufficiently reduce gasoline tax revenues. Further commitment to this course of action is identified in the legislative strategy and its implementation which staff is currently pursuing (further discussed in a later section).

Potential Erosion of Transportation Revenues due to Electronic-Commerce

Electronic commerce (e-commerce) has taken the retail industry by storm in the past few years with the advances in internet technology. More and more internet users are making purchases online, often not having to pay local and state sales taxes. Online purchases can be either business-to-consumer or business-to-business transactions. The difference between e-commerce and conventional sales is the venue. Rather than selling directly to consumers through a store or through a sales representative, e-commerce uses the internet. New start-up internet businesses that sell merchandise can virtually be located anywhere in the world since these businesses may not need prime physical locations to succeed. Therefore, they can locate in areas where real estate and other overhead are low. However, many of the "blue chip" type businesses also have a large presence in e-commerce, suggesting that online shopping has provided a credible portal for additional sales.

Given this current situation, there has been concern regarding the potential erosion of the retail sales and use tax due to internet spending. Local sales taxes for transportation as well as Transportation Development Act revenues, which are derived from a ¼ percent sales tax, would be directly impacted from trends in retail sales. On a national level, the U.S. Congress created an

advisory commission to make recommendations on how to address the impacts from e-commerce. The recommendations from the commission include extending the current moratorium on e-commerce taxation for an additional five years through 2006, and establishing clear "nexus" rules to determine whether businesses would be subject to sales and use tax collection obligations. [7]

Current retail sales conducted over the internet remain small relative to total retail sales. According to the Advisory Commission report, online retail sales only accounted for 0.64% of all retail sales in the nation during the fourth quarter of 1999. This amounted to sales of $5.3 billion out of a total of $821.2 billion. However, business-to-business transactions are predicted to dominate the e-commerce industry, with transactions forecasted to be $1.3 trillion by 2003. [8]

The potential impacts from e-commerce on the Southern California economy are not well known, although any trends towards the actual loss of sales tax revenue attributable to the internet would have to be addressed by the transportation community. Since taxation issues and policies on e-commerce are currently under review nationally, it is premature to incorporate any potential revenue implications in the 2001 RTP financial plan. However, this topic should remain on the forefront of discussion in future RTP updates.

Economic Factors

The general health of the nation's economy underlies much of the revenues generated for transportation. Whether through excise taxes, sales taxes or transit fares, overall economic conditions play a large role in the level of revenues that go toward transportation. Although it is difficult to predict economic fluctuations, the revenue model takes a more conservative approach to providing forecasts in the outer years of the RTP time horizon. The approach includes maintaining historical average growth rates for the revenue sources or using incremental growth patterns such as the step-up method. This provides fiscal responsibility to the assessment of the region's ability to finance transportation projects over a long-term period. In addition, the de-escalation rate of 3 percent is kept constant in the model to provide simple comparisons between alternatives in different time frames.

Framework for the Revenue Forecast

The revenue model was developed within a framework that was approved by the Finance Task Force. The elements of the framework include the following:

- The forecast horizon for the 2001 RTP is from 1997 through 2025.

- The underlying assumptions and numbers are based on the financial planning documents developed by the local county transportation commissions and transit operators in the region, as well as by Caltrans. This ensures consistency between the SCAG forecast and the planning

[7] Advisory Commission on Electronic Commerce, Report to Congress, April 2000.
[8] Ibid.

documents of the county commissions. The numbers are organized on an aggregate basis to represent the anticipated transportation funding amounts for the region.

- The financial plans collected from each county have forecast periods that vary for the funding sources. Some plans included 5-year forecasts, while others provided 10 and 20-year projections.

- Where there are gaps in the projections in the outer years between the county forecasts and the RTP time horizon, additional revenue growth assumptions were made. These included using some of the growth assumptions that were contained in the prior 1998 RTP, and deriving average or conservative growth rates that could be extrapolated from the financial plan documents.

- Given the size of the region, the revenue growth rates for the funding sources contain variations among the counties.

- The forecast would provide a benchmark from which additional funding could be identified for the unfunded RTP projects.

Specific Revenue Assumptions

From the framework established for the revenue model, specific revenue growth assumptions were developed which provided the foundation for the revenue forecast. The forecast seeks to maintain consistency with the financial plans developed by the various county transportation commissions and transit operators. Therefore, the revenue forecast contains several revenue assumptions provided by these local agencies. In addition, some of the assumptions are based on growth rates made in the 1998 RTP, as well as from historical data. The growth assumptions for each revenue source are contained in the following table. The growth rates cited are in nominal terms unless indicated otherwise.

LOCAL REVENUE SOURCES

Transportation Development Act

TDA funds are derived from a ¼ percent sales tax on retail sales in the state. Funds are returned to the county of tax generation. The TDA revenue growth rates vary for each county based on sales tax forecast data provided by the local transportation commissions. TDA revenues in the earlier years of the RTP time horizon (1997-1999) are based on actual revenues. In the future years, for some counties, a range of growth rates was used. The annual nominal growth rates assumed through 2010 include the following:

- Imperial – 2 percent
- Los Angeles – 4 to 5.5 percent
- Orange – 5 to 10 percent
- Riverside – 4 to 8.5 percent
- San Bernardino – 3 to 7 percent
- Ventura – 5 percent

The growth rates for TDA are consistent with those for local sales taxes since both sources are tied to sales tax revenue generation. The TDA revenue estimates provided by OCTA for Orange County include a reduction of $38 million per year between 1998 and 2011 for matters related to the county bankruptcy settlement. In addition, there is a reduction of $50 million in TDA revenues for Los Angeles County between 1997 and 2001 that is transferred to the county's General Fund for matters related to the Orange County bankruptcy recovery. The reduction in those years is included to account for the TDA revenues that are assumed to not be used for transportation purposes.

In the outer years of the RTP beyond the CTC financial plans (generally after 2010), conservative average annual growth rates are derived and assumed for each respective county, or a growth rate to use was suggested by a CTC's Chief Financial Officer. The rates are as follows: Imperial, 2 percent; Los Angeles, 5 percent; Orange, 5 percent; Riverside, 4 percent; San Bernardino, 4 percent; Ventura, 5 percent.

Local Sales Tax

Revenues are derived from locally imposed ½ percent sales taxes in five counties in the region. Ventura County does not have a local transportation tax. Similar to TDA, revenue growth rates vary for each county based on local CTC sales tax forecast data. Revenues in the earlier years of the RTP time horizon (1997-1999) are based on actual revenues. The growth rates are consistent with those for TDA since both sources are tied to sales tax revenue generation. In the baseline, it is assumed that the "self-help" county taxes expire between 2009 and 2011. The sunset dates for the counties include:

LOCAL REVENUE SOURCES

- Imperial – 2010
- Orange – 2011
- Riverside – 2009
- San Bernardino – 2010

Los Angeles County has a permanent 1 percent local sales tax for transportation.

Farebox

Funding is derived from fare revenue estimates contained in financial sections of short range transit plans for the major transit agencies, and long range financial plans from the LACMTA and OCTA.[9] Revenues in the forecast account for fixed route services (bus and urban rail), smart shuttles, paratransit and dial-a-ride services. In addition, forecasted fare revenues were collected from the Southern California Regional Rail Authority for the Metrolink commuter rail system. The commuter rail revenues are distributed among the counties that support the rail service, based on data provided by SCRRA. Due to service modifications that are proposed in the transit plans, various growth rates in farebox collection are assumed for the transit operators. The growth would account for both ridership increases and increases in transit fares during the timeframe of the plan. In addition, to account for fare revenues generated by smaller transit operators providing service in the region, including in San Bernardino County and Ventura County, fare revenues were estimated for these operators and combined into the overall county fare revenue totals. The nominal rates assumed include:

- Imperial – flat
- Los Angeles – 1 to 5 percent
- Orange – 2 to 11 percent
- Riverside – 5 to 14 percent
- San Bernardino – 7 to 10 percent
- Ventura – 1 to 5 percent

The Metrolink system-wide growth rate during the forecast ranges from 4 percent to 7 percent annually.

[9] Major transit operators from which short range plans were collected include Omnitrans (San Bernardino County), Riverside Transit Agency (Riverside County), Sunline Transit Agency (Riverside County), and South Coast Area Transit (Ventura County). Long range financial plans were collected from MTA (for all LA County operators) and OCTA. Data on Imperial County transit was collected from Imperial County Public Works staff who administers the transit programs.

LOCAL REVENUE SOURCES

Local Agency Funds

Includes locally generated revenues in Los Angeles and Orange Counties. For Orange County, these funds include the Gasoline Tax Fund which is a gas tax exchange program between OCTA and the cities created from the county bankruptcy recovery; local contributions to committed projects; forecasted Transportation Corridor Agency (TCA) user toll revenues at an annual growth rate of 2 percent; and local maintenance of effort TIP funds. The toll revenues only include user tolls and do not include development impact fees, interest income, or loans provided by the federal government. The RTP Technical Advisory Committee agreed on including revenues and costs for the toll roads since the toll roads are part of the existing SCAG highway network. Los Angeles County funds include local agency funds that contribute to projects such as the Alameda Corridor, Transportation System Management, Transportation Demand Management and regional bikeways.

Miscellaneous Local Sources

Includes local revenue sources such as transit advertising and auxiliary revenues, lease revenues, and interest and investment earnings from reserve funds. Revenues are based on financial data from transit operators and local CTC's.

STATE REVENUE SOURCES

State Transportation Improvement Program/Interregional Transportation Improvement Program

Funds are based on the 1998 STIP Amendment program of projects for years 1999-2004. Revenues include TEA-21 funding, remaining 1996 STIP funding programmed through 2003, and 1996 and 1998 interregional program funds. Average annual revenues for each county were derived starting in 2005 based on the programmed funds. Similar to the 1998 RTP, a 10 percent increase in revenues is assumed every ten years beginning in 2005 using the step-up growth method. Revenues in the forecast are separated between the STIP regional share and the interregional share. OCTA and LACMTA provided long-range forecasts of STIP revenues. OCTA assumes a 2 percent annual growth in STIP funds, while MTA assumes a constant annual funding amount of $220 million in regional improvement funds starting in 2007.

State Transit Assistance

Revenues derived mainly from the sales tax on a portion of the gas excise tax, plus sales tax on diesel fuel sales. Funding for 2000 and 2001 is based on data from financial sections of short range transit plans and financial plans for county transportation commissions. Revenues in the earlier years of the RTP time horizon (1997-1999) are based on actual revenues as reported in the TDA Statutes and California Code of Regulations (published annually by Caltrans). Levels of STA funding has been uncertain in the past due to its sensitivity to annual legislative budgetary activities. While this uncertainty exists, however, it is assumed that growth occurs in funding over time. To account for this, STA funding is assumed to increase by 1 percent per year. LACMTA forecasts STA revenues for Los Angeles County using a 1 to 2 percent annual growth rate through 2025. OCTA forecasts between 4 and 5 percent annual growth through 2025.

Transit Capital Improvement/Proposition 116

Remaining revenues in the prior Transit Capital Improvement program as well as from Proposition 116 for the region. TCI revenues are assumed to be fully depleted in 1999, while Proposition 116 funds are assumed depleted by 2007. The Public Transportation Account replaced the Transportation Planning and Development Account in 1998 per Senate Bill 45 (Kopp).

STATE REVENUE SOURCES

State Highways Operation and Protection Plan

State gas tax revenues used for operations, maintenance and rehabilitation of the highway system. Revenues from 1997 through 2000 are based on historic expenditure data provided by Caltrans headquarters and Districts 7, 8 and 12, as well as District 11 for Imperial County. Revenues from 2001 through 2025 are based on the 2000 Ten-Year SHOPP program developed by Caltrans. The revenues assumed between 2001 and 2004 by the SHOPP program vary within each county on an annual basis since the program must balance the highway needs of the entire state. Funds after 2004 are the average of the revenues between 2001 and 2004 for each county. Similar to the STIP, a 10 percent increase in revenues is assumed every ten years beginning in 2005. The forecast uses LACMTA's long-term SHOPP forecasts for L.A. County beginning in 2005, which assumes a 3 percent annual growth.

The Governor's Traffic Congestion Relief Plan

AB 2928 (Torlakson), SB 1662 (Burton), and SB 406 (Ortiz) commit approximately $8.2 billion in new transportation funding statewide. Of this amount, approximately $5 billion is expected to fund the Governor's Traffic Congestion Relief Plan (TCRP). The SCAG region would receive approximately $2.3 billion (or an estimated $1.9 billion in 1997 dollars) in new revenues to cover a portion of the cost for specified projects. The revenues are spread over a six-year period of FYs 2001 through 2006, with the annual distributions varying for each county. The local transportation commissions in the region provided input as to the estimated annual funding amounts during the six-year period.

FEDERAL REVENUE SOURCES

Regional Surface Transportation Program

Federal TEA-21 flexible spending program. Short-term revenues for each county are based on Caltrans estimates for FY 1999-2000 and SCAG RTIP estimates for 2001-2003 (provided by Caltrans). The revenues for years 1998 through 2004 are based on a 2 percent average growth rate provided by Caltrans. For the long-term, revenues continue to grow at 1.4 percent annually starting in 2005 which is the historic growth in the federal highway trust fund. The forecast uses LACMTA's long-term RSTP forecasts for L.A. County beginning in 2005, which assumes a 1.4 percent annual growth. OCTA assumes 2 percent annual growth.

Congestion Mitigation and Air Quality Program

TEA-21 funding program for federally designated air quality non-attainment areas. Imperial County does not receive CMAQ funding. Short-term revenues are based on Caltrans estimates for FY 1999-00 and SCAG RTIP estimates for 2001-2003 (provided by Caltrans). The revenues for years 1998 through 2004 are based on a 2 percent average growth rate provided by Caltrans. For the long-term, revenues grow at 1.4 percent annually starting in 2005 which is the historic growth in the federal highway trust fund. The forecast uses LACMTA's long-term CMAQ forecasts for L.A. County beginning in 2005, which assumes a 1.4 percent annual growth. However, the MTA assumes a downward adjustment in CMAQ funding starting in FY 2004 to reflect improvements in air quality standards in Los Angeles County, with an assumed drop in funding by 50 percent in 2011 when attainment of the air quality standards are to be met. This drop in funding is not assumed for the other counties. OCTA assumes 2 percent annual growth.

Local Assistance

Includes other important federal programs including Regional Transportation Enhancements, Highway Bridge Replacement and Rehabilitation, Hazard Elimination Safety and Railroad/Highway Grade Crossing Protection. Funding between 1998 and 2004 is based on Caltrans statewide annual apportionments for these programs and SCAG's estimated share (approximately 49 percent, based on population). This category also includes Federal High Priority Projects identified for the region in the TEA-21 legislation between 1998 and 2003. However, demonstration funding is not assumed after 2003 due to the unpredictability of this program for the region. The forecast also includes ISTEA/other federal funds identified for the Alameda Corridor and Santa Monica Boulevard Parkway projects, as well as revenues for the LACMTA federal clean fuel bus program. For the long-term, revenues grow at a rate of 1.4 percent annually starting in 2005, which is the historic growth in the federal highway trust fund. OCTA assumes 2 percent annual growth.

FEDERAL REVENUE SOURCES

Transit Section 5307 Capital

Revenues for transit projects. Near term funding through 2006 is based on forecasted data from financial sections of short-range transit plans and financial plans for county transportation commissions. Revenue forecast includes rural transit funding for Imperial County and Riverside County. Near term funding varies by year by county, depending on the programming assumptions utilized by the transit operators and CTC's when developing their short-range plans and financial plans, respectively. The forecast also includes federal operating funds for 1997 and 1998 that were contained under the former Section 5307 operating program, which was eliminated per TEA-21. For the years beyond the financial plans, average revenues are derived for each county based on their respective forecasts, with a 1.4 percent annual growth starting in 2005 which is the historic growth in the federal highway trust fund. The forecast uses LACMTA's long-term transit funding forecasts for L.A. County through 2025, which assumes a 1.4 percent annual growth. OCTA assumes 2 percent annual growth.

Transit Section 5309

Revenues for new starts, and fixed guideway improvements including bus and rail. Funding is based on forecasted data from financial sections of short range transit plans and financial plans for county transportation commissions. It is assumed that Ventura County and Imperial County do not receive this funding source in the forecast. New Rail Starts funding for OCTA's Centerline Rail project is assumed, per OCTA's 2000 Long Range Financial Plan. Near term funding amounts vary by year by county, depending on the programming assumptions utilized by the transit operators and CTC's when developing their short range plans and financial plans, respectively. For the years beyond the financial plans, average revenues are derived for each county based on their respective forecasts, with a 1.4 percent annual growth starting in 2005 which is the historic growth in the federal highway trust fund. The forecast uses LACMTA's long-term transit funding forecasts for L.A. County through 2025. MTA documents separate funds between New Starts and Fixed Guideway Modernization. New Starts funding remains flat at $65 million per year through 2012, from which then the funds increase to $75 million per year thereafter and stay constant. Fixed Guideway Modernization funding assumes a 1.4 percent annual growth. Both funding types are combined in the forecast tables under this source.

Baseline Revenues

The following tables summarize the baseline revenues for the region including the conditions and growth assumptions made. The revenues are disaggregated by county and by revenue source for the full RTP period. The numbers are presented in constant 1997 dollars, using a 3 percent de-escalation factor.

Graphical depictions of the total baseline revenues for each county are also shown.

County by County Revenue Forecast, 1997-2025
Millions (constant 1997 dollars)

Table 5

Funding Source	County						
	Imperial	Los Angeles	Orange	Riverside	San Bernardino	Ventura	Total
Local Sources							
TDA	$66.9	$7,554.3	$3,041.1	$1,302.3	$1,515.5	$638.9	$14,118.9
Local Sales Tax	76.6	30,106.1	3,722.4	1,010.3	1,240.9	0.0	36,156.3
Farebox	5.5	9,379.0	1,542.4	870.1	824.1	135.2	12,756.3
Local Agency Funds [1]	0.0	1,153.7	3,492.5	0.0	0.0	0.0	4,646.2
Miscellaneous Funds [2]	0.0	1,121.8	1,084.3	56.5	87.7	53.7	2,404.0
Subtotal	148.9	49,314.9	12,882.7	3,239.2	3,668.3	827.8	70,081.8
State Sources							
STIP, Regional	172.7	3,671.5	1,153.8	756.0	942.2	470.2	7,166.4
STIP, Interregional	151.3	557.1	141.3	268.5	463.8	125.3	1,707.2
Traffic Congestion Relief	8.0	1,447.5	202.1	91.0	160.8	12.0	1,921.4
STA	4.5	601.0	128.2	27.3	68.1	27.8	857.0
TP&D (TCI)/PTA	0.9	68.7	89.6	10.9	34.5	3.4	208.1
SHOPP/O&M	256.9	2,033.9	408.1	590.6	1,510.3	464.2	5,264.1
Subtotal	594.4	8,379.7	2,123.1	1,744.3	3,179.8	1,102.9	17,124.2
Federal Sources							
RSTP	23.3	1,360.9	371.4	259.0	320.7	142.5	2,477.8
CMAQ	0.0	1,289.9	471.9	249.8	308.3	143.4	2,463.3
Local Assistance [3]	11.0	631.6	125.7	125.5	163.1	94.1	1,151.0
Sec. 5309	0.0	1,334.6	949.8	70.4	94.0	14.0	2,462.8
Sec. 5307 [4]	3.3	2,963.2	560.1	221.0	278.7	169.0	4,195.2
Subtotal	37.5	7,580.2	2,478.9	925.5	1,164.9	563.0	12,750.1
Total	$780.8	$65,274.8	$17,484.7	$5,909.1	$8,013.0	$2,493.7	$99,956.0

Notes:

[1] Includes Orange County Gasoline Tax Fund and TCA public toll road user revenues; and local contributions to committed programs.

[2] Includes transit advertisement and auxiliary revenues, lease revenues and interest and investment earnings.

[3] Includes programs such as Regional Transportation Enhancements, Highway Bridge Rehab., Grade Crossings and Hazard Elimination. Also includes Federal High Priority Projects for the region, other federal funds for specific projects (e.g. Alameda Corridor) and MTA clean fuels program.

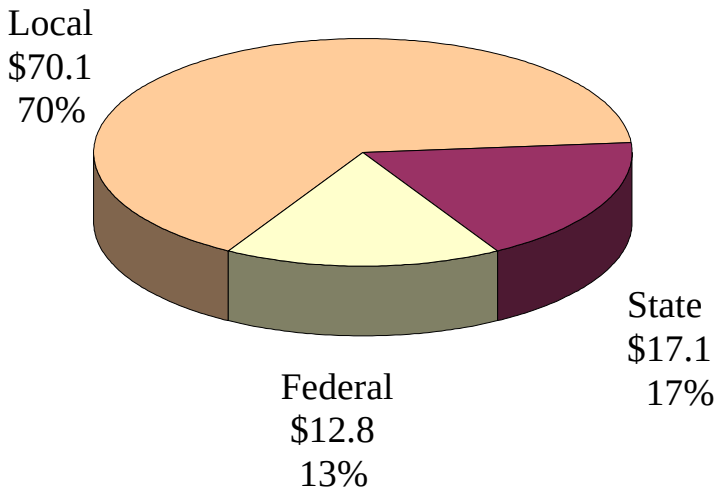
[4] Includes Section 5311 (rural operating) funds for Imperial and Riverside Counties.

Local gas tax subventions are not included in the revenue forecast, assuming that the subventions are not used for "regionally significant" projects. The EPA's use of the term "regionally significant" is intended to include those transportation projects that would have significant impacts on regional travel, emissions and air quality.

Local sources comprise 70 percent of the overall forecast, with state sources totaling 17 percent, and federal sources making up 13 percent (Figure 1). While the forecast falls well short of funding all of the needed transportation projects in the region, it provides a benchmark from which additional funding could be identified for the list of RTP projects.

Figure 1

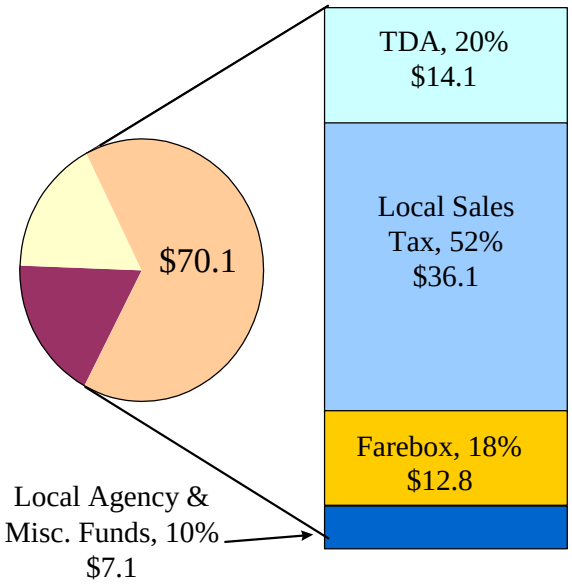
SCAG Regional Revenues
Years 1997-2025
Billions (in constant 1997 dollars)
$100.0 Billion Total



In the breakdown of the local sources, dedicated transportation sales taxes make up the majority of revenues, roughly $36 billion of the $70 billion in local monies (Figure 2). Currently, five counties in the region have a local sales tax dedicated for transportation. However, four counties will lose their measure sales taxes over the next 10 years due to the expiration provisions in the taxes. Los Angeles County has a combined 1 percent permanent local sales tax for transit. Farebox revenues and Transportation Development Act revenues primarily make up the rest of the local sources. The farebox revenues include forecasted fare revenues for the Metrolink system.

Figure 2

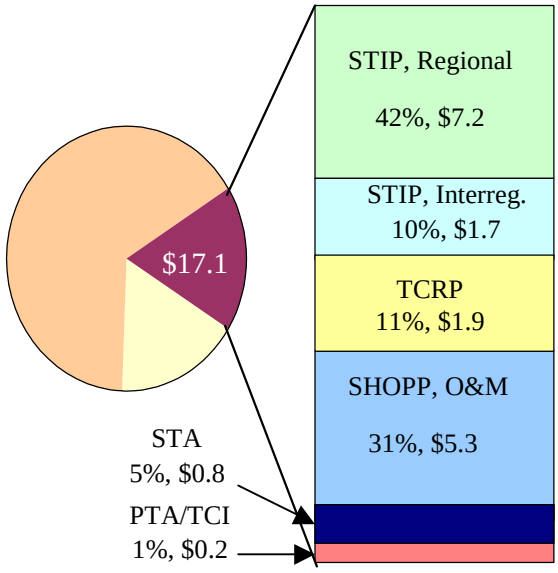
SCAG Regional Revenues, Local Sources, Billions



State revenue sources are composed mainly of the State Transportation Improvement Program (STIP) and the State Highway Operation and Protection Plan (SHOPP), which are funded primarily by the state gasoline excise tax. These two sources make up 83 percent of the State funding portion in the revenue forecast (Figure 3). State funded transit programs and the Governor's Traffic Congestion Relief Plan make up the remaining state funds.

Figure 3

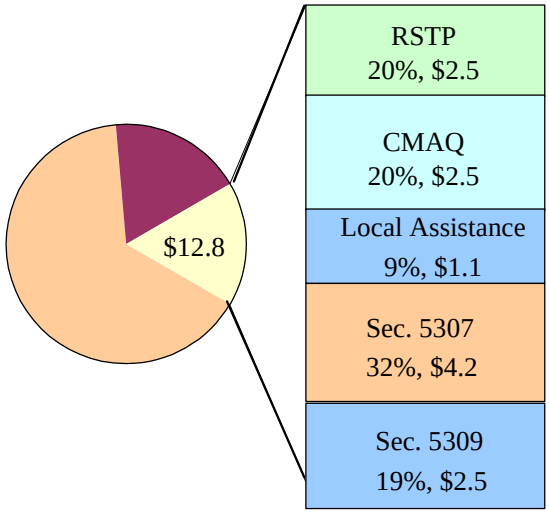
SCAG Regional Revenues, State Sources, Billions



Federal revenues are composed of several sources, including the Surface Transportation Program, Congestion Mitigation and Air Quality, and transit capital programs (Figure 4). The most flexible federal program in terms of the use of the revenues, the STP program, generates 20 percent, or $2.5 billion, of the federal total of $12.8 billion.

Figure 4

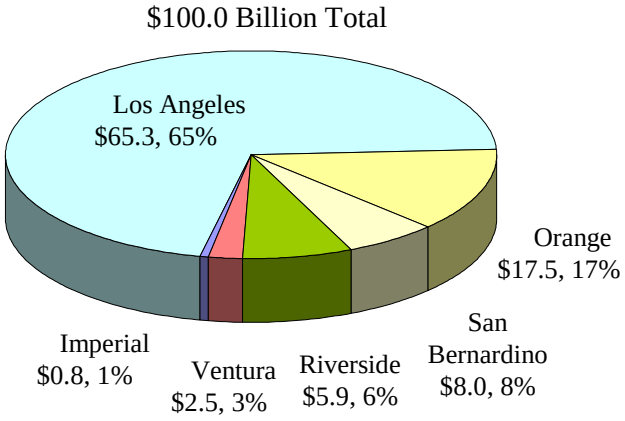
SCAG Regional Revenues, Federal Sources, Billions ($1997)



On a county-by-county basis, Los Angeles County's share of the overall revenues is about 65 percent, or about $65.3 billion, followed by Orange County at 17 percent, or $17.5 billion (Figure 6). San Bernardino County's share is 8 percent, Riverside County 6 percent, Ventura County 3 percent and Imperial County 1 percent of the regional revenues.

Figure 5

SCAG Regional Revenues, County Shares, Billions ($1997)



Figures 6 through 11 depict the breakdown of revenues by local, state and federal sources for each county, as well as a further breakdown of the largest source of revenues per county. Local sources in four of the six counties in the region make up the greatest share of those counties' respective forecasted revenues. Local sources range from 19 percent of a county's revenues (Imperial) to 75 percent (Los Angeles). Local sales taxes contribute to the large local share of the county revenues. In addition, forecasted Metrolink fare revenues are distributed among the counties that support commuter rail service. Local revenues for Orange County include toll revenues raised by the Transportation Corridor Agencies. State revenue sources make up the majority of Imperial County forecasted transportation revenues.

Figure 6
Los Angeles County Revenues, Billions ($1997)
$65.3 Billion Total

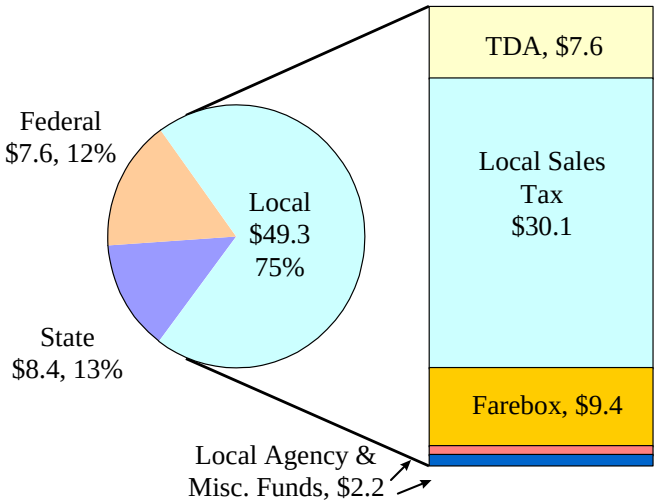


Figure 7
Orange County Revenues, Billions ($1997)
$17.5 Billion Total

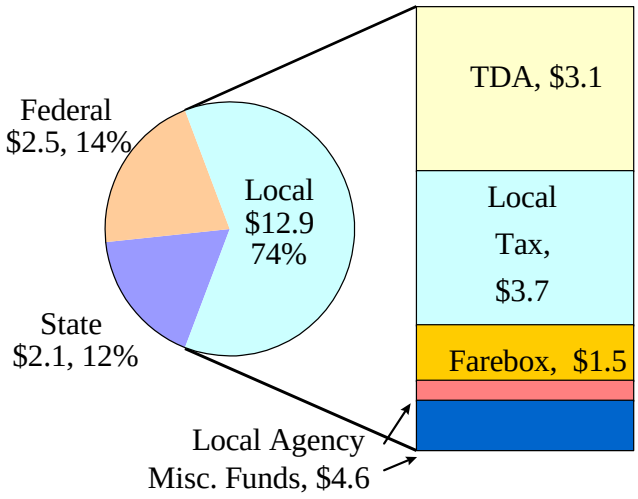


Figure 8
Riverside County Revenues, Billions ($1997)
$5.9 Billion Total

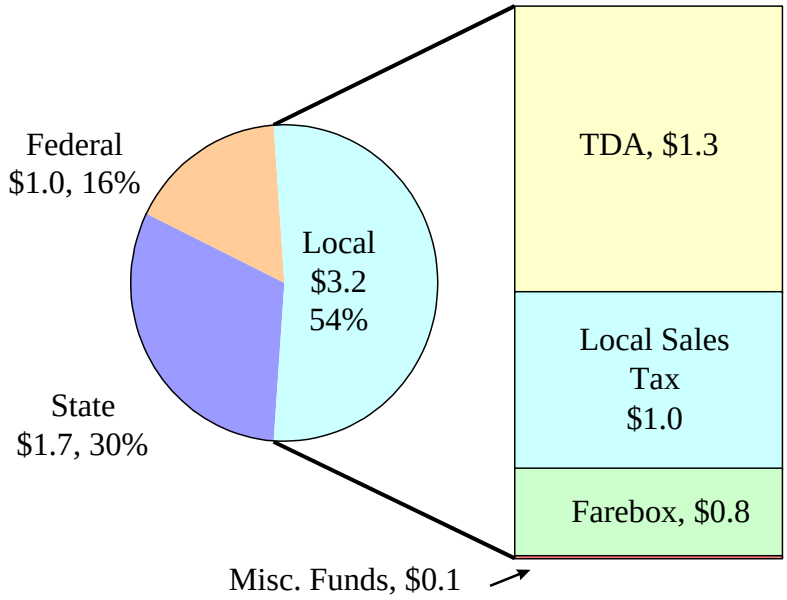


Figure 9

San Bernardino County Revenues, Billions ($1997)
$8.0 Billion Total

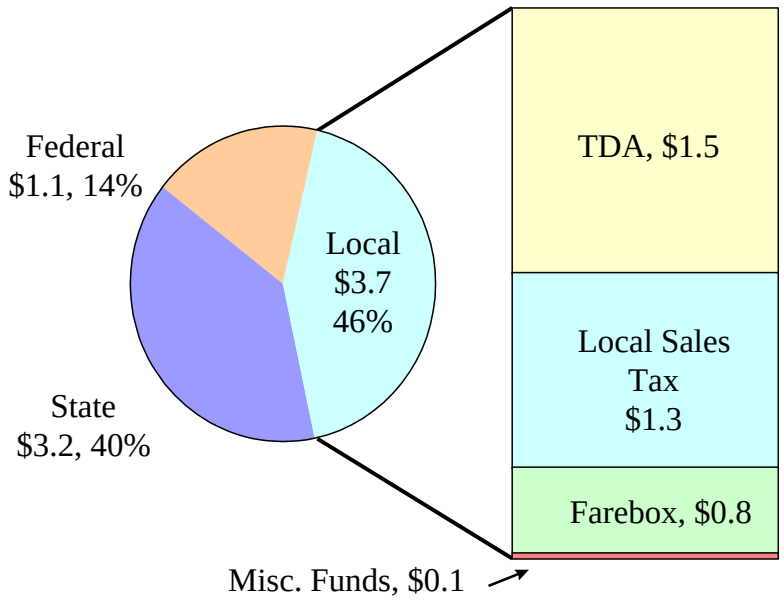


Figure 10

Ventura County Revenues, Millions ($1997)
$2.5 Billion Total

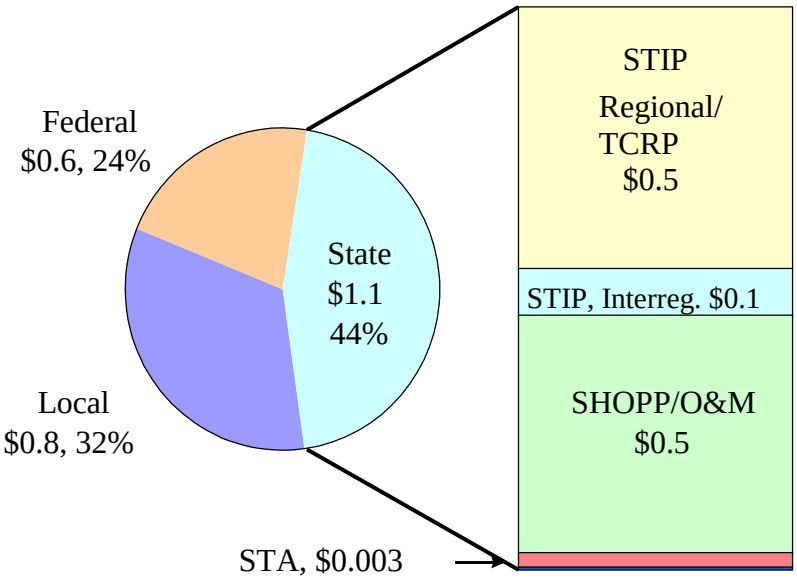
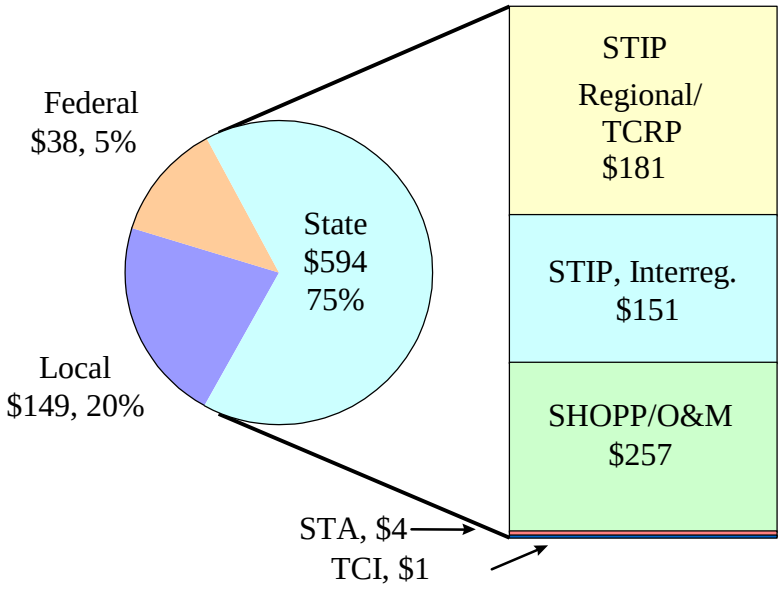


Figure 11

Imperial County Revenues, Millions ($1997)
$781 Million Total



Baseline Costs

The baseline costs represent the committed transportation program which includes short term committed capital projects and on-going long term operations and maintenance costs for the regional transportation system. The baseline costs provide a comparison figure against the revenues to determine the funding available for additional projects proposed in the RTP.

There are five general categories of baseline costs. They include:

- RTIP Capital – committed projects contained in short term capital improvement programs, including the RTIP;
- Governor's Plan – projects selected by the Governor for inclusion in the six-year State Traffic Congestion Relief Program.
- Measure Tax Projects – committed project costs funded by local Measure sales tax dollars;
- O&M – operations and maintenance expenses for both transit and roadways. The expenses include capital replacement and rehabilitation of transit systems as well as highway rehabilitation projects during the RTP period. O&M costs for the region's transportation system are assumed to include future maintenance and rehabilitation costs for the committed capital projects contained in the above categories. The implementation of the MTA consent decree is included in the O&M costs.
- Bonds – current debt service payments and debt issues anticipated by the CTC's during the RTP period. A portion of TCA debt service that is assumed to be offset by user toll revenues for the Orange County public toll roads is also included in the baseline costs.

While these categories were similar to the ones used in the past SCAG RTP, new cost assumptions were developed, resulting in significant updates to the baseline costs. Below is a detailed description of the methodology to conduct the update to the baseline costs.

1. RTIP Capital

- Includes regionally significant projects contained in the Regional Transportation Improvement Program (RTIP) for years 2001 through 2006. Projects include highway, arterial, transit and non-motorized modes that are part of the SCAG transportation network. The costs in each of the TIPs represent the capital program commitments made by the local transportation commissions, SCAG and Caltrans.

2. Traffic Congestion Relief Program

- Includes the program of projects selected for inclusion in the Governor's TCRP for the region.

3. Measure Tax Project Costs

- Includes remaining costs to implement the Measure expenditure programs after debt service costs are deducted. These costs are assumed to be financed through the pay-as-you-go method using the balance of measure tax dollars after debt service payments each year.

- The costs shown for Los Angeles County are estimates for transit related capital costs financed in part through the county's local sales tax programs. The county's local transportation taxes are fundamentally different from the "self-help" taxes because they provide an on-going source of local revenue that pays for an array of transit services and transit related projects. Because the sales tax revenues are distributed among a variety of on-going transit programs, such as O&M for transit, some of the costs associated with these sales tax programs are reflected in other baseline cost categories.

4. Operations & Maintenance

- The forecast includes on-going O&M, capital replacement and rehabilitation costs for the current transportation system, including transit services and roadway systems in the region.

- The forecast also includes future O&M, capital replacement and rehabilitation costs of transportation projects proposed in the RTIP. The Finance Task Force concluded that since new transit and roadway capital projects are included in the RTIP costs, the associated O&M and future rehabilitation and replacement of these capital projects should be included in the forecast to depict a more accurate picture of the overall expenses incurred by the local transportation agencies. These anticipated costs, which primarily do not take effect until after 2010, are on top of those costs required for the current system. Future maintenance and rehabilitation requirements for RTIP projects are assumed in the forecast between 2010 and 2025.

- The full implementation of the MTA consent decree is assumed, and its long term O&M, rehabilitation and replacement implications are included in the baseline O&M cost for transit.

- A detailed O&M methodology is described in the following bullet points for transit and roadways.

Transit O&M

- O&M data is collected from the most recent short range transit plans of the major transit operators in the region, or the long range financial plans of some CTC's. The short range plans generally cover years 2000 through 2004 or 2006, while the long range plans cover from years 2000 through 2018 or 2025. [10]

- Costs included in the forecast are for fixed route services (bus, urban rail and commuter rail), smart shuttles, paratransit and dial-a-ride services.

- Growth rates in annual O&M costs through year 2025 for each of the transit operators are derived from the growth rates assumed in each operator's respective O&M cost forecast. O&M costs generally follow the rate of inflation in the range of 3 to 6 percent per year. However, where service adjustments are proposed in the short term plans, O&M subsequently increases above the range of inflation in some years, up to 20 percent, but then reverts back to around the inflation range. The short range plans for Riverside Transit and Omnitrans indicate considerable growth in service to serve the expanding population bases.

- The MTA's financial plan also accommodates anticipated growth in population. Future growth in the Los Angeles County transit network reflects areas of population growth and a resulting increase in demand for transit services. For example, the North County which includes Palmdale and Lancaster is expected to see significant growth that will require increasing the bus fleet from 65 to at least 180 vehicles by the year 2020.

- Additional O&M was added after 2006 for each operator to account for the assumption that capital expansion costs for additional bus vehicles and related facilities are made by the operators in the RTIP. The Finance Task Force concluded that since transit capital requests are included in the RTIP costs, the associated O&M to go along with the capital projects should be included in the forecast to depict a more accurate picture of the expenses incurred by the transit operators. The inclusion of these cost estimates, in combination with the O&M estimates described in the aforementioned bullets, added to the baseline costs. The forecast includes an assumed number of bus purchases by each operator by 2006, and calculates an annual O&M cost per new bus based on an average of $70 per revenue hour multiplied by an estimated 3,000 hours per year. These annual costs are then escalated by the same O&M growth rates applied for the rest of the service. The O&M forecast provided in MTA's long range plan is assumed to incorporate the associated O&M from vehicle expansions after 2006.

[10] Major transit operators from which short range plans were collected include Omnitrans (San Bernardino County), Riverside Transit Agency (Riverside County), Sunline Transit Agency (Riverside County), and South Coast Area Transit (Ventura County). Long range financial plans were collected from MTA (for all LA County operators) and OCTA. Data on Imperial County transit was collected from Imperial County Public Works staff who administer the transit programs. The Southern California Regional Rail Authority provided cost data for the Metrolink commuter rail system.

- In addition to operations and maintenance, the Finance Task Force agreed that the costs to replace and rehabilitate the transit vehicles for both existing and near-term expansion services should be included throughout the life of the RTP. With an average extended life of 12 years per vehicle within a 29-year time horizon of the RTP, the capital replacement and rehabilitation estimates added to the overall baseline O&M costs. Using the fleet inventory contained in the operators' transit plans and the presumed expansion vehicles in the RTIP, an estimated vehicle replacement schedule was developed through 2025 for each operator. The assumed replacement cost per bus was assumed to be $350,000 starting in the year 2000 and escalated by 3 percent annually. The O&M forecast provided in MTA's long range plan is assumed to incorporate the associated replacement costs. OCTA financial staff provided the estimated replacement schedule and costs through 2025 for its fleet.

- The financial plan for OCTA included an annual cost estimate for rehabilitation of transit facilities. An annual estimate of $5 million per year was added to Orange County's O&M cost total.

- MTA's long range financial plan is assumed to provide all of the costs associated with transit O&M, facilities maintenance, capital replacement and rehabilitation for its fleet (both bus and urban rail) and for the municipal operators in the county.[11] The MTA plan shows significant increases in costs over the past three years since the 1998 RTP was adopted. The annual cost increases for bus transit, for example, range from 10.1 percent from 1998 to 1999 and 13.8 percent from 1999 to 2000.[12] These increases reflect the current and long-term transit operations, rehabilitation and replacement costs resulting from the implementation of the consent decree. Among the requirements contained in the consent decree is a substantial addition of new bus service through the year 2006, which greatly increases O&M costs. In addition, an Accelerated Bus Purchase Program required to update an aging transit fleet contribute to cost increases. However, the MTA plan assumes that transit cost savings measures, including reducing station dwell times and reducing revenue vehicle hours through coordinated service efficiencies, would reduce the projected operating deficit.

- The portion of MTA bus acquisition costs financed by the Governor's Traffic Congestion Relief Plan or through debt financing were subtracted to avoid double counting. These costs would be included in their respective baseline cost categories.

- O&M transit cost also includes the projected Metrolink operating, rehabilitation and renovation costs through the RTP period. Cost projections were collected from SCRRA documents. The O&M and rehabilitation/renovation costs were divided into county shares and included in the member counties' total for O&M. The percentage split of the costs among the counties were provided by SCRRA.

- Local measure sales tax revenue contributions that go towards transit O&M are subtracted to avoid double counting. The expenditure plans guiding the measure tax programs in each "self help" county direct an amount of sales tax revenues to assist the transit operators. The

[11] MTA Financial Forecasting Model, March 2000 and July 2000.
[12] Includes the growth rate of inflation.

Measure tax contributions to transit O&M are instead reflected in the Measure Tax Project Cost category in the baseline.

Table 6

Baseline Transit O&M, Rehabilitation & Capital Replacement Costs
1997-2025
(Billions, 1997 dollars)

Imperial	$0.06
Los Angeles	40.1
Orange	5.2
Riverside	2.7
San Bernardino	1.9
Ventura	0.8
Total	$50.7

Note: County totals include future Metrolink operating and rehabilitation/renovation expenditures through 2025.

Roadway O&M

- Includes O&M and rehabilitation costs for the SCAG-designated regional highway and arterial network.

- Data is collected from several sources, including information from Caltrans Headquarters and the Caltrans Districts in the region, the SCAG 1997 Highway Network Model, Assembly of Statistical Reports published annually by Caltrans, and Inventory of Ten Year Funding Needs for California's Transportation Systems, developed in response to State Senate Resolution 8 (Burton, 1999).

- Highway O&M costs for 1997 through 2004 are based on historical O&M expenditure data provided by Caltrans Districts 7, 8, 12 and the Imperial County portion of District 11, as well as data in the 2000 State Highway Operations and Protection Plan (SHOPP). It is assumed that the highway project costs in the SHOPP program closely match the revenues provided by the SHOPP. Therefore, the growth in highway operations, maintenance and rehabilitation reflect the growth in SHOPP revenues in the forecast. Costs after 2004 are the average of the project costs between 2001 and 2004 for each county. In addition, a 10 percent increase in cost is assumed every ten years beginning in 2005. The forecast uses LACMTA's long-term SHOPP forecasts for L.A. County beginning in 2005, which assumes a 3 percent annual growth.

- For arterials and major collectors that are part of the SCAG highway network, the number of lane miles in each county was found using the SCAG 1997 Highway Network Model.

- An average O&M cost per lane mile of arterial and collector was calculated separately for each county in the region. Data was contained in the SR 8 report on current O&M and rehabilitation expenditures for maintained street and road lane miles, as reported by each county. O&M cost for arterials and major collectors in the SCAG highway network was then calculated. Costs per lane mile ranged from $1,000 in Imperial County to $7,000 in Ventura County. These costs reflect actual spending on a per mile basis reported by the local agencies in the SR 8 funding needs report.

- An average rate for the California construction cost index (CCI) was derived to escalate the annual O&M roadway costs through 2025. The average CCI is based on historical rates collected by Caltrans for State highway construction projects. The average rate for the last 10 years is 5 percent, which includes cyclical variations in construction costs.

- Roadway O&M for Orange County includes operations and administrative costs for the public toll roads operating in the county. The RTP Technical Advisory Committee agreed on including revenues and costs for the public toll roads since they are part of the existing SCAG highway network. The O&M costs, based on the 1999 annual financial disclosure statements produced by the Transportation Corridor Agencies, are assumed to be about $29 million in 1999 and escalated by 2 percent per year. Maintenance costs of the roadways paid for by Caltrans are not included in this total.

- Additional roadway O&M was added after 2010 for each county to account for the assumption that new roadway projects contained in the RTIP will also incur operating and maintenance expenses as well as rehabilitation during the later years of the RTP. The Finance Task Force concluded that since new roadway projects are included in the RTIP costs, the associated O&M and rehabilitation for these capital projects should be included in the forecast to depict a more accurate picture of the overall expenses incurred by the local transportation agencies in the region. The additional O&M followed the same cost methodology and growth rates as the arterials costing described in the earlier bullets. Rehabilitation costs are assumed to take effect every five years beginning in 2016 using an assumed cost of $100,000 per lane mile, growing annually by 5 percent through 2025.

Table 7

Baseline Roadway O&M and Rehabilitation Costs
1997-2025
(Billions, 1997 dollars)

Imperial	$0.3
Los Angeles	5.4
Orange	2.0
Riverside	1.6
San Bernardino	2.7
Ventura	1.0
Total	$13.0

Note: Roadway costs are for the SCAG Highway network.

5. Bonds

- Updated annual debt service payment data was collected from each local transportation commission. Data was contained in either internal financial documents or long range financial plans. The bonds are typically debt against the local Measure sales tax revenues.

- The debt service payments include both the principal and interest payments.

- Debt service payments are projected through the years that the local sales taxes are in effect. The payments end when the sales taxes expire for each "self help" county, namely between 2009 and 2011, except for Los Angeles. Los Angeles County's debt service projections are continuous through 2025 since the county has two permanent local transportation sales taxes.

- The bond costs included in this category are subtracted from the Measure Tax Project Cost category to avoid double counting.

- Bond costs for transit bus acquisition in Los Angeles County are included in this category and are subtracted from the county's O&M baseline category to avoid double counting.

- The RTP Technical Advisory Committee recommended including a portion of annual debt payments by the Transportation Corridor Agencies for the three public toll roads in Orange County. The RTP TAC agreed on including revenues and costs for the public toll roads since they are part of the existing SCAG highway network. However, the TAC also recommended the assumption that the toll road revenues should offset the toll road costs. Therefore, the portion of debt service included in the RTP baseline cost for Orange County equals the forecasted user toll revenues minus an annual amount for operations costs. The toll revenues in the forecast only include user tolls and do not include development impact fees, interest income, or loans provided by the federal government. It is assumed that the toll revenues included in the forecast offset the operations and bond costs, essentially not impacting the regional financial checkbook.

- Debt service payments for Los Angeles, Orange, Riverside and San Bernardino Counties include allocations for anticipated future debt issues. The estimated future debt payments were based on the long range financial plans of MTA and OCTA, and data provided by the Chief Financial Officers at the Riverside County Transportation Commission and San Bernardino Associated Governments. RCTC anticipates one new debt issue in fiscal year 2001-2002, while SANBAG anticipates three new debt issues in fiscal years 2000-2001, 2002-2003 and 2004-2005.

All baseline costs from 1997 through 2025 are adjusted to constant 1997 dollars using the same de-escalation factor as the revenue forecast, which is 3 percent (adopted rate). This is to ensure consistency between the adjustment of the forecast for both revenues and costs, and enable a level analysis.

The following table shows the draft baseline costs by category on a per county basis for the RTP.

DRAFT RTP Baseline Costs
By Category
Billions (1997 Dollars)

Table 8

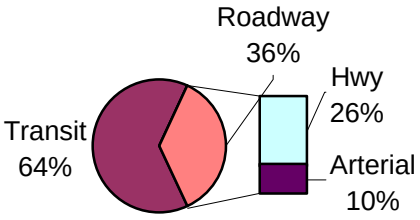
	RTIP Capital (1)	Measure Tax Project Costs (2)	O&M (3&4) Transit & Roadways	Bonds (5)	TCRP (6)	Total
Imperial	$0.20	$0.08	$0.33	$0	$0.04	$0.64
Los Angeles	5.83	4.04	45.42	5.84	5.24	66.37
Orange	4.44	2.33	7.21	2.83	0.21	17.02
Riverside	0.81	0.42	4.29	0.34	0.25	6.10
San Bernardino	1.18	0.64	4.55	0.56	0.79	7.71
Ventura	0.50	0	1.79	0	0.01	2.30
Total	$12.95	$7.51	$63.59	$9.56	$6.53	$100.14
Notes:						
(1) Includes current TIP (2001-2006)						
(2) Includes sales tax revenues minus debt service payments. LA sales tax revenues distributed among other baseline cost categories (mainly O&M transit)						
(3) Includes O&M, capital replacement and rehabilitation. Forecasted O&M and capital replacement is also assumed for new capital projects in the RTIP. Also includes Metrolink O&M and rehabilitation/renovation costs.						
(4) Includes SHOPP, Caltrans O&M and arterials maintenance in the SCAG highway network.						
(5) Primarily debt bonded against Measure tax revenues. Includes anticipated new debt service issues during RTP period. Also includes debt bonded against TCA toll revenues in Orange County.						
(6) Costs are shown in constant 1997 dollars.						

Transportation Mode Split of Baseline Costs

Based on the 2001 RTP's baseline cost estimate of $100 billion, the following charts characterize the transportation mode split for the region. As figure 12 indicates, about 64 percent of the region's baseline costs are transit-related expenditures while an estimated 36 percent represent roadway costs.[13] Roadways are further divided into highway and arterial expenditures. Highways comprise approximately 26 percent of the baseline costs while arterial expenditures account for about 10 percent[14]. Figure 13 provides a further breakdown of the baseline mode split on a county by county level.

Figure 12

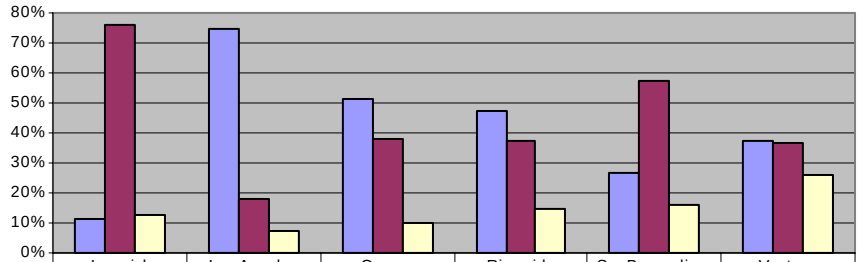
Mode Split of Public Cost for Baseline ($100 B)



Note: ITS, TDM & Non-Motorized Category constitutes less than 1% of total costs and are not reflected here.

Figure 13

Mode Split of Public Cost for Baseline ($100 B) by County



	Imperial	Los Angeles	Orange	Riverside	San Bernardino	Ventura
Transit	11%	74%	52%	48%	27%	37%
Highways	76%	18%	38%	37%	57%	36%
Arterials	13%	7%	10%	15%	16%	26%

[13] Transit related expenditures for the region is mostly attributable to Los Angeles County. Moreover, transit expenditures in Los Angeles County is primarily due to LACMTA's capital and operating programs.
[14] Local streets and roads are not included in this analysis. Roadway expenditures as outlined here, consist of highway and major arterial costs that come through the regional planning process.

Transportation Mode Split of Total Cost (Baseline & Plan)

Additionally, the following figure 14 depicts the regional mode split of public expenditures for new RTP Projects. Figure 15 combines both baseline and new RTP projects. And figure 16 includes both public and private costs. Note: highway category includes truck lanes and arterial category includes grade crossings.

Figure 14

Mode Split of Public Cost for New RTP Projects ($24 B)

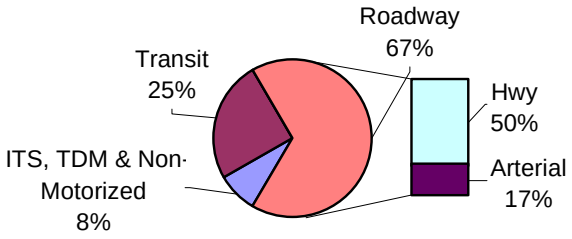


Figure 15

Regionwide Mode Split of Total Public Costs (Baseline & Plan, $124 B)

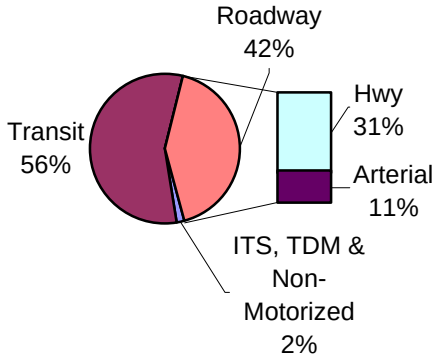
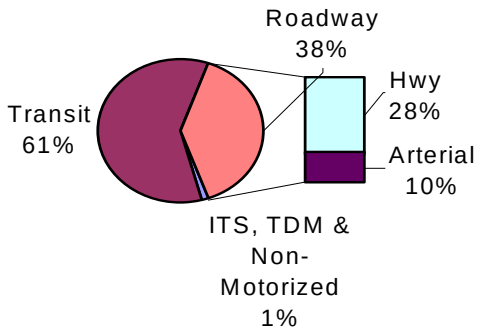


Figure 16

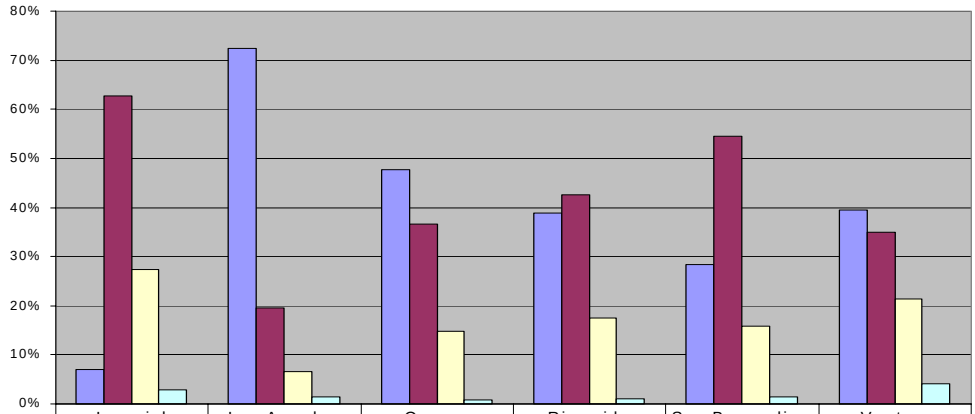
Mode Split of Total Cost (Public & Private) of Baseline & New RTP Projects ($144 B)



The following figure 17 provides a further breakdown of mode split on a county by county basis. Figure 17 accounts for the mode split of both public and private costs of baseline and new RTP projects.

Figure 17

Mode Split of Baseline & Plan (includes Private Expenditures)



	Imperial	Los Angeles	Orange	Riverside	San Bernardino	Ventura
Transit	7%	72%	48%	39%	28%	39%
Highways	63%	19%	37%	43%	54%	35%
Arterials	27%	7%	15%	17%	16%	21%
TDM, ITS, NM	3%	1%	1%	1%	1%	4%

Funding Shortfall

To assess the region's finances, the baseline revenues were compared to baseline expenditures in the form of a "regional checkbook." As the far right column in table 9 below illustrates, the region will have a closely balanced revenue-to-cost forecast to operate, maintain and rehabilitate the current transportation system, as well as build short term committed projects, over the 2001 RTP period. However, the SCAG region will require additional public revenues (an estimated $24 billion) to fund the public share of long term proposed RTP project costs (see the constrained list of projects). SCAG anticipates that the $24 billion in public funds would be derived from maintaining the region's traditional transportation revenue sources, which might otherwise be lost in the years to come. Additionally, SCAG anticipates the implementation of innovative financing strategies to offset about $20 billion of the total cost of new RTP projects.

Table 9

2001 RTP Regional Checkbook by County												
County	**Baseline Revenues**		**Baseline Costs**		**Net Balance**		**Public Cost of New RTP Projects**		**Funding Shortfall**		**Public Funding Strategy**	
Imperial	$	0.78	$	0.64	$	0.14	$	0.38	$	(0.24)	$	0.24
Los Angeles	$	65.27	$	66.37	$	(1.09)	$	9.46	$	(10.55)	$	10.55
Orange	$	17.49	$	17.02	$	0.46	$	3.94	$	(3.47)	$	3.47
Riverside	$	5.91	$	6.10	$	(0.19)	$	4.20	$	(4.39)	$	4.39
San Bernardino	$	8.01	$	7.71	$	0.30	$	5.20	$	(4.90)	$	4.90
Ventura	$	2.49	$	2.30	$	0.19	$	1.15	$	(0.96)	$	0.96
Total	$	99.96	$	100.14	$	(0.18)	$	24.33	$	(24.51)	$	24.51

Notes:

1) Numbers may not add due to rounding.
2) Includes revenues from the Governor's Traffic Congestion Relief Plan. Local gas tax subventions are not included in the revenue forecast, assuming that the subventions are not used for "regionally significant" projects. The EPA's use of the term "regionally significant" is intended to include those transportation projects that would have significant impacts on regional travel, emissions, and air quality.
3) Baseline costs include current TIP (2001-2006) capital projects that are "regionally significant." Traffic Congestion Relief Plan projects are also included. Additionally, committed sales tax revenues and funds from other sources for Measure projects are included. Measure tax project costs are spread between "pay as you go" financing and debt financing. Includes anticipated new debt service issues during the RTP period. Also includes debt bonded against forecasted TCA toll revenues in Orange County. Also included are Operations and Maintenance expenses for both transit and roads, Caltrans 2000 SHOPP, and transit capital replacement/rehabilitation. Forecasted transit and roadway O&M and capital replacement are assumed for the existing SCAG regional transportation infrastructure and new capital projects in the 2001/2006 RTIP. See technical appendix for further information.
4) Revenues and Costs are in constant 1997 dollars, millions.
5) The region's public funding strategy does not assume the extension of Measure M in Orange County nor the imposition of a local transportation sales tax in Ventura County.

Guiding Principles to Formulate the SCAG Region's Public Funding Strategy

To address this potential funding shortfall, SCAG formulated a comprehensive funding strategy with two primary objectives:

1. The strategy should provide sufficient revenue to fund the program of projects in the RTP.

2. The strategy should provide sufficient revenue to fund high priority projects that ensure that the region will remain in compliance with air quality conformity requirements.

In developing SCAG's public funding strategy, a set of guiding principles assisted the Finance Task Force. The adopted principles are as follows:

1. Ensure that local/regional control is maintained over the decision-making associated with expending the revenues.

2. Rely on the system's users and other direct beneficiaries, in proportion to their impact, to finance a portion of the cost for the facilities and services they require.

3. Provide for flexibility in how the funds may be used to ensure that the highest performing projects will be constructed.

4. Provide for a series of funding options that, in combination, will promote equity in the distribution of benefits and burden.

5. Advance project planning, design and construction of those projects which ensure that the SCAG region remains in compliance with air quality conformity requirements.

Alternative Funding Options Reviewed

Within the context of the guiding principles, SCAG's committees discussed the adequacy and feasibility of revenue raising options available to address the region's potential funding shortfall. Among the options considered included road impact fees and fees based on miles of travel. Although these options would generate varying degrees of revenues for the region, many of SCAG's policy makers did not favor their implementation, citing various technical and political obstacles. This section provides analyses of the funding options that were reviewed. Additionally, this section focuses on those funding options incorporated into the 2001 RTP including funding components that make up SCAG's adopted public and innovative funding strategies.

Fees Based on Miles of Travel and Road Impact

In basic terms, fees based on miles of travel assess the number of miles driven multiplied by a fee per mile. These kinds of fees remain an option in alternative financing for transportation. Several issues, however, continue to be debated in a public forum. Social equity concerns, for example, remain a topic of discussion.

Certainly, there are possible methods for structuring miles traveled fees to achieve some form of equity among varying income levels. They include having an allowance for a certain number of miles to be driven free before a fee is imposed, instituting a progressive fee rate structure or a combination of both. Additionally, fees could be graduated based on cost responsibility (damage of roads), which would take into consideration vehicle size and weight, value, emissions, or other pertinent characteristics.

Although such proposed methods could possibly assist lower-income residents living in outlying suburbs who must travel a long distance to work, and promote a more equitable assessment based on cost responsibility, SCAG recognized both the political challenges and the difficulties associated with implementing such a user fee, including methods to track and collect the fee.

Toll Roads

SCAG also considered the benefits and costs of tolling facilities throughout the region. Under selected conditions a facility, especially a new highway, could be financed by tolls. A project selected to be funded entirely from this mechanism would be removed from competing for broader based revenues.

In recognizing the benefits of such a user facility, the 1998 RTP identified toll road financing as a mechanism to add highway capacity. With diminishing traditional state and federal funding, decisions were made to utilize toll roads supported by user fees as a way to construct needed highway improvements. Currently there are several toll road facilities in operation in Orange County, including the SR 91 Express Lanes (which traverses through parts of Riverside County as well) and the San Joaquin Hills, Eastern and Foothill Corridors.

Different institutional arrangements exist for the SR 91 Express Lanes and the other toll roads. The San Joaquin Hills and Foothill/Eastern public toll roads are guided by two separate joint power agencies made up of elected officials from Orange County and adjacent cities. Each agency operates independently and is financed separately. Ownership of the public toll roads was turned over to Caltrans, which is responsible for maintenance. The toll roads will remain until all municipal construction bonds are paid off; at which point they will be converted to freeways.

The 10-mile SR 91 Express Lanes, on the other hand, is the first privately financed toll road in the United States in more than 50 years and is the first fully automated toll facility in the world. The toll road employs variable congestion pricing in which the tolls are higher during peak commute times going westbound in the morning and eastbound in the afternoon. Customers are

able to select from three different account types based on planned frequency of usage of the toll road.

The private entity, the California Private Transportation Company (CPTC), is a joint partnership of the developers Peter Kiewit Son's Inc., Granite Construction, and a French toll road company. The project is a build-operate-transfer facility in which ownership of the toll roads was formally transferred to Caltrans prior to opening in December 1995, then leased back to CPTC to operate for 35-years. After the 35-years, the roads will be returned to the state for operations.

The CPTC is responsible for the cost of maintenance, operations and the policing of the toll roads. Since the toll roads are officially part of the California State Highway System, the CPTC contracts with the California Highway Patrol (CHP) to provide police services. It is estimated that the State will save about $120 million in CHP, operations and maintenance expenses over the 35-year lease period. This is in addition to the $132 million cost savings of the construction of the facility.

Indexing the State Gas Tax or Wholesale Gasoline Prices

The concept of indexing can be described as tying the revenue generating ability of a funding source to the cyclical movement of the general economy. Indexing in this case means adjusting a tax (i.e. gas tax) by an appropriate market indicator, such as the Consumer Price Index (CPI) or Construction Cost Index (CCI). By indexing the gas tax or gasoline prices, for example, a relationship is built between the growth in fuel tax revenues and inflation. The underlying objective of these strategies is to maintain a rate of growth in transportation revenues that reflects the increases in project costs over time. The current structure of the gas tax is linked more to consumption of gasoline versus linking the tax to project expenses or market value of the fuel.

The strategy of indexing the wholesale price of gas would be to create a tax that is indexed and then levied on the crude oil prices, refinery margin and dealer mark-ups. This is essentially the wholesale price of gasoline. All existing taxes are excluded from the wholesale price. The California Energy Commission estimated that, on average in the year 2000, the refinery margin, which includes production costs, marketing and profits, is about 63 percent of the crude oil price per gallon. Dealer margins are estimated to be about 10 percent of the crude oil price per gallon.

Issues Associated with Indexing

Economic Context

When addressing issues of indexing and increasing the gas tax, some thought should be given to the context in which this policy might operate. In general, higher inflation and high gas prices are more favorable for an indexing strategy. For example, when the growth in the index is tied to the CPI, high inflation from year to year may mean higher adjustments to the index and higher revenues.

Generally, low inflation and low gas prices are more favorable for a cent per gallon strategy. If an index is used in these circumstances it is likely that revenues would be lower. Under this condition, increasing the cents per gallon tax may result in a better revenue stream.

Determination of the Base

Determining the base is quite important. A higher base tax rate against which the CPI or CCI is applied yields higher revenues. For example, indexing the per gallon tax by the CPI will yield higher revenues when the tax base is 18 cents per gallon as opposed to being at a lesser rate. Similarly, if the base year selected is one with higher revenues for indexing the wholesale price of gasoline, the base tax rate would be relatively higher than that in another year with lower revenues.

Escalation Methodology

The escalation methodology is an important decision as well. Whether the CPI is selected as the index to use or the CCI, it would result in a marginally different escalation rate.

Creating Caps or Floors

Unrestrained indexing may result in an unacceptable loss of revenues or an unacceptable gain in revenues because of extremes associated with the factors used to create the index. In states that have used indexing, there is a cap on the amount of revenue generated to prevent excessive gas taxes that would create political problems. A floor is often created to ensure that revenues, as a result of the index, do not fall below a level that would result in an unacceptable curtailment of transportation programs funded by the revenues derived from the index.

Indexing Alternatives

Two concepts of indexing were discussed as potential alternative user fees. One strategy included indexing the current 18-cent per gallon gas tax by the Consumer Price Index (CPI) annually, while a second strategy involved indexing a percentage of the wholesale price of gasoline by the CPI annually.

The following table and chart compares the revenues generated statewide from each of the two alternative concepts of indexing. In addition, a forecast of the existing per gallon gas tax with no increases is shown for comparison against the alternatives. As shown, by using a base year of 1999, indexing the gas tax and the wholesale price of gasoline would generate comparable revenues while being above the revenues that would be raised by the current excise tax. However, because the wholesale price of gasoline would be tied to crude oil market fluctuations, the 20-year total could vary significantly.

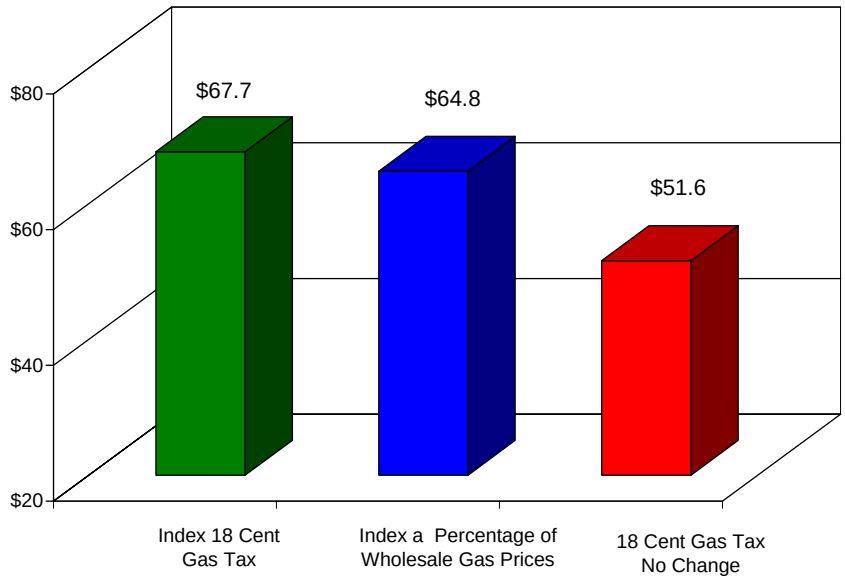
Comparison Between Alternative Indexing Strategies
Statewide Revenues, 1999-2020 *(In Thousands)*

Table 10

		Indexed by CPI *(Inflation Adjusted from $.18)*		**Index the Wholesale Price of Gas by CPI** *(Adjust % Tax on Crude Oil, Refinery and Dealer Margins)*		**No Change in Current Excise Tax**	
Inflation	Year	Tax Incre.	Revenue	Tax Incre.	Revenue	Tax Incre.	Revenue
2.27%	1999	0.180	$ 2,495,880	20.91%	$ 2,495,932	0.18	$ 2,495,880
2.34%	2000	0.184	2,611,086	21.40%	2,580,944	0.18	2,551,500
2.69%	2001	0.189	2,725,441	21.97%	2,692,321	0.18	2,593,440
2.11%	2002	0.193	2,839,880	22.44%	2,805,369	0.18	2,646,540
2.40%	2003	0.198	2,973,096	22.98%	2,935,156	0.18	2,705,760
2.40%	2004	0.203	3,113,852	23.53%	3,070,325	0.18	2,767,500
2.45%	2005	0.207	3,263,117	24.10%	3,215,518	0.18	2,830,860
2.39%	2006	0.212	3,417,147	24.68%	3,369,381	0.18	2,895,300
2.44%	2007	0.218	3,579,143	25.28%	3,533,469	0.18	2,960,460
2.43%	2008	0.223	3,751,377	25.89%	3,708,072	0.18	3,029,400
2.42%	2009	0.228	3,930,196	26.52%	3,892,004	0.18	3,098,880
2.46%	2010	0.234	4,121,181	27.17%	4,088,657	0.18	3,171,600
2.44%	2011	0.240	4,309,292	27.83%	4,288,399	0.18	3,237,300
2.43%	2012	0.245	4,497,355	28.51%	4,486,498	0.18	3,298,455
2.46%	2013	0.251	4,693,395	29.21%	4,693,493	0.18	3,359,610
2.44%	2014	0.258	4,895,586	29.93%	4,910,586	0.18	3,420,765
2.47%	2015	0.264	5,106,121	30.66%	5,137,306	0.18	3,481,920
2.49%	2016	0.271	5,330,428	31.43%	5,379,205	0.18	3,546,540
2.47%	2017	0.277	5,561,619	32.20%	5,629,436	0.18	3,611,160
2.45%	2018	0.284	5,799,809	32.99%	5,888,181	0.18	3,675,780
2.47%	2019	0.291	6,047,353	33.81%	6,157,957	0.18	3,740,400
2.48%	2020	0.298	6,304,485	34.65%	6,439,093	0.18	3,805,020
	Total		$67,653,573		$64,786,703		$51,595,830

Figure 18

Comparison of Statewide Revenue Totals from Alternative Indexing Strategies, 1999-2020 In Billions



Federal Recognition of Opportunities for Innovative Financing to Accelerate Project Delivery

In addition to alternative funding methods discussed above, several federal programs for innovative financing were taken into consideration for the SCAG region. The federal government has recognized the need to supplement the traditional means of transportation funding by introducing several innovative financing vehicles in TEA-21. To provide a framework for the following discussion on federal innovative financing programs, the following discussion begins by defining "program funding" and "project financing."

Program Funding

In broad terms, program funding relies on predictable streams of revenue from one or more taxes, e.g., the gas tax or a local sales tax, to fund a project. The success of transportation development has been government's ability to create predictable streams of revenue available for the construction, maintenance and operations of transportation facilities and services. In the case of the State of California, three revenue streams have been developed.

The first was the state gas tax that has been available for highway and local street and road purposes since 1922 and has enjoyed constitutional protection since 1938[15]. Historically, the gas tax revenues have been used to finance projects on a pay-as-you go basis as opposed to issuing debt.

The second was the Transportation Development Act (TDA) revenues, enacted in 1971 by the California State Legislature. The TDA set aside a ¼ percent of the local sales tax in each county for public mass transportation. In Los Angeles County, this revenue is almost exclusively used to subsidize transit services provided by MTA and the municipal operators. This stream of revenue created by TDA ensures that California has a basic level of transit services in both its urban and rural communities.

A third stream of revenue was created during the 1980's to fund transportation improvements. Local sales taxes dedicated to finance transportation investments gained voter approval at the county level throughout California. In Los Angeles County, two ½ percent sales taxes secured voter approval for the purpose of supporting transit operations and transit construction. Los Angeles' sales tax has become the foundation for the rail construction program.

Consequences of Program Funding

The program strategy of funding created relatively stable and predictable revenue streams, which had several important consequences. The first was the creation of transportation systems. These systems, especially the roadway/highway network, has created unprecedented mobility supported by a dedicated revenue stream.

At the federal level, a predictable stream of revenue was established for the Interstate Highway program with the creation of the Highway Trust Fund in the 1950's. This revenue stream in combination with state revenues supported the construction of the 44,000-mile Interstate Highway system. In recent years this program has evolved into one that emphasizes reconstruction of a largely built out Interstate Highway system. Since the 1970's the Federal Highway Trust Fund has also included revenues for cities and counties to improve their local systems of arterial streets.

At the local level, the Transportation Development Act sustained existing transit systems and allowed for the creation of transit operations. The local sales tax programs, such as Propositions A and C in Los Angeles County, created predictable revenue streams that supported the construction of Blue, Green and Red Lines. The continuous availability of dedicated revenue also supported the creation of large permanent agencies, e.g., Caltrans, and LACMTA.

[15] The emergence of urban rail transit as viable alternative to highway construction resulted in the state constitution being amended in 1974 to permit gas tax funds to be used for the construction of rail transit facilities.

Project Financing

With revenue from ongoing funding sources increasingly being committed to sustain the existing transportation system, attention is being given by some in the transportation community to project specific financing as a means to fund new transportation facilities. SCAG recognized the importance of project financing in the funding strategies proposed in the 1998 Regional Transportation Plan for dedicated truck lanes, Hot Lanes and the MAGLEV project.

Project financing in its purest form relies upon a stream of revenue generated by the project against which debt can be issued. A toll road is the best transportation example of this sort of funding. Realistically, many projects, however, don't have a strong independent flow of revenue that is sufficient to finance the entire project. In this case, a variety of strategies are used to take advantage of the limited project cash flow in combination with public funds to finance a project. Moreover, if the project is operated through a service contract by non-governmental, private entity, an additional source of funding may be found. Another important feature of project financing is the sharing of risk between the entity sponsoring the project, the developers of the project, the project operators and the financial interests. This is important as an inducement to attract financing. These complex financing relationships are the essence of public-private partnerships.

In addition to the financial relationships, public-private partnerships often result in a different structure for project delivery, operations and maintenance. Often the investors in the project insist on a format outside the traditional governmental format in order to ensure that schedules are met and costs and risk are managed. For example, SR 91 is financed through a complex structure of debt and equity. After completion, it was turned over to Caltrans and then leased back. This was done so that certain liability matters would be borne by the state. While the consortium "operates" the lanes, it contracts with the California Highway Patrol (CHP) for enforcement and with Caltrans for maintenance. This distribution of responsibility is to spread risk and to manage operating costs.

The SCAG region has been the site of several important project-financing efforts. These include the Alameda Corridor Project, the San Joaquin Hills, the Foothill and the Eastern toll roads in Orange County and the SR 91.

SCAG's proposed SR-60 Truck Lane project will also serve as an example of project financing in the region. SCAG assumes the imposition of tolls on trucks that use this facility. To raise construction funds totaling about $4.3 billion (in 2000$ -- $3.9 billion in 1997$), net revenues from the tolls would be leveraged to issue bonds. It is assumed, however, that net toll revenues alone would be insufficient to fund the construction of the truck lanes.[16] It is estimated that toll revenues would provide roughly 30 percent of the project cost. Local, state and federal grants would cover the resulting funding gap. Additionally, GARVEE bonds (further described in the innovative finance section below) would be issued to accelerate project construction. The 2001 RTP's I-15 truck lane project also assumes 30 percent private support via toll revenues to offset its total cost.

[16] Net toll revenue includes interest earnings and subtracts operations and maintenance expenses.

SCAG also assumes the use of innovative public-private partnership for its high speed MAGLEV project. While the cost of the system is estimated to be $16 billion (in 1997 $), SCAG anticipates that the majority of funds to offset the expenses would be from private sources. The project would be supported by a combination of revenue-backed bonds and loans – in particular, TIFIA loans (see next section for discussion). Assuming high ridership levels, the project is expected to generate a positive cash flow to cover any outstanding debt service in addition to operating expenses. SCAG also assumes a one-time federal grant contribution of $950 million.[17]

Examples of Innovative Financing

Through the re-authorization of federal transportation legislation, mechanisms to leverage federal transportation funds have been enacted. The two most recent are Grant Anticipation Revenue Vehicles (GARVEE) and the Transportation Finance and Innovation Act of 1998 (TIFIA). Each of these alternatives provides certain funding opportunities and entails certain risks. GARVEE instruments are essentially revenue anticipation bonds being used by states to accelerate project construction. The debt is retired from future federal funds. The structure of risk and debt financing will differ from state to state and project to project.

Grant Anticipation Revenue Vehicles

Grant Anticipation Revenue Vehicles (GARVEEs) offer an advantage in that it permits the issuer to pledge future federal highway funds to repay investors on the debt service. Basically, GARVEEs allow an issuer to promise investors that federal funds will be available in the future to repay the tax-exempt debt.

Prior to 1995, states could use their federal highway grants to repay only the principal component of the debt service. This was inconsistent with the provisions of debt retirement since most payment in the early years goes to interest. The National Highway System Designation Act of 1995 changed the rule to allow all associated debt costs to be reimbursable by federal funds. These debt costs include interest, principal, insurance, and other costs associated with the sale of bonds. Subsequently, the rule change was permanently enacted into law.

Several states have utilized this tool in the past few years, including Massachusetts, Ohio, New Mexico and New Jersey. One important criterion for the success of GARVEE bonds, as perceived by bond rating agencies, is the time schedule of repayment. This leads into the types of GARVEE bonds that could be structured, namely short-term GARVEEs and long-term GARVEEs.

Short-term GARVEEs are defined as bonds backed by future federal funds that are currently authorized. This reduces a degree of risk to the investor although annual appropriations can still be uncertain. Long-term GARVEE bonds are backed by federal funds that are beyond current authorizations. These present higher levels of risk due to uncertainty with reauthorization.

[17] Federal Railroad Administration grant

In California, Senate Pro-Tempore John Burton introduced Senate Bill 928 relating to GARVEEs. The components of the bill, which became California law in October 1999, are as follows:

- Would authorize the California Transportation Commission (CTC), in cooperation with Caltrans and the regional transportation planning agencies, to establish guidelines for eligibility for GARVEE bond funding allocations;
- Would authorize the CTC, through the State Treasurer to issue GARVEE bonds to be disbursed by Caltrans;
- Would limit GARVEE bond allocations to any county to 50 percent of that county's share of expected federal highway revenues for ten years following the allocation;
- Would count all cost overruns and financial costs against that county's STIP share in the year that the federal revenues would be used to pay off the project; and
- Would require the CTC to dedicate and pledge future federal transportation funds to pay the interest, principal, and premium on the bonds on any outstanding GARVEE bonds in the State.

As with the rest of the state, the SCAG region could potentially benefit from this program by being able to pledge future federal funds to build today's needed infrastructure.

Transportation Infrastructure Finance and Innovation Act

The Transportation Infrastructure Finance and Innovation Act (TIFIA) is a limited five-year pilot program that is designed to address the funding shortfall for large new transportation investments by providing a variety of credit enhancement tools to project sponsors. The Act seeks to maximize and leverage limited federal resources by attracting private sector and non-federal funds.

TIFIA establishes a far more complex funding opportunities. Under this act, USDOT may provide direct federal loans, federal loan guarantees and standby lines of credit to large projects. Federal funds cannot be pledged to secure the debt. Other revenue streams, including private funds, dedicated to the projects are considered "dedicated revenue streams". Essentially, there is an opportunity with TIFIA to take advantage of private investment in a project.

Secured loans are basically direct loans with flexible repayment schedules that would match the project's revenue stream. Loan guarantees would provide "full faith and credit" guarantees by the federal government and lower the financial risk to investors by allowing federal funds to backup the repayment of the loan. This method also would allow flexible repayment schedules. Federal standby lines of credit are essentially secondary sources of funds that could be used to make debt payments if the primary source goes into default.

The U.S. Department of Transportation is responsible for administering the program and selecting projects. Below are the eligibility requirements for a project to qualify:

- Be an eligible surface transportation project as defined under the federal transportation code;
- Be included in a state transportation plan and the approved State Transportation Improvement Program;
- Cost at least $100 million ($30 million for Intelligent Transportation System projects) or 50 percent of the state's most recent apportionment of federal-aid highway funds, whichever is less; and
- Be supported by user charges or other non-federal dedicated revenue sources.

Other requirements include calling for the project sponsor to provide a preliminary bond rating opinion letter from a recognized bond agency. Projects that meet the requirements would then be selected based on their ability to generate economic benefits, support international commerce, or otherwise enhance the national transportation system.

The federal credit program would complement the State Infrastructure Bank program (see discussion on SIBs later in this section) by directing resources to transportation investments of national significance such as inter-modal freight transfer facilities, highways, inter-city bus and rail projects and other projects with national benefits.

Over the five years from 1999 through 2003, the TIFIA program would support approximately $11 billion in federal credit assistance. With the federal role in credit assistance capped at 33 percent of the total project costs, the program can stimulate over $32 billion in new transportation investment when private sector spending and non-federal funds are included in the total funding picture.

For the SCAG region, this program could help with the financing of a relatively expensive and large or complex facility that is perceived to be significant not only to the region, but to the country as a whole.

As discussed previously, it is anticipated that SCAG's MAGLEV project would utilize TIFIA loans as one of several financing instruments. The project's preliminary financial plan includes a combination of bonding and loans – TIFIA loans are estimated at about $1 billion to offset the first phase of the project (about $4.8 billion).

State Infrastructure Bank

TEA-21 established a new State Infrastructure Bank (SIB) pilot program under which four states, including California, are able to enter into cooperative agreements with the U.S. DOT to set up infrastructure revolving funds that are capitalized with federal transportation funds authorized between fiscal years 1998 and 2003. The funding sources that can be used include the National Highway System and the Surface Transportation Program. The California SIB can now provide direct loans, rather than only credit enhancement programs like loan guarantees.

Projects that are eligible for SIB assistance include highway and transit capital projects. This program provides another venue for leveraging federal resources by attracting other public funds and private sector resources.

The original SIB program was conceived from the National Highway System Designation Act of 1995. The first SIB program in California was created as a vehicle to enhance the credit worthiness of an agency sponsoring a project by providing credit mechanisms that could strengthen the debt financing ability of the agency. Under TEA-21, actual federal dollars could now be deposited into the bank.

The original SIB program also required separate transit and highway accounts. Under the new SIB, there is no requirement to keep separate accounts, which could mean that both transit and highway projects would compete for the same revolving funds.

The new State Infrastructure Bank authorized under TEA-21 could provide an avenue for the SCAG Region to fund projects that are eligible for federal aid.

Federal Privatization Opportunities

The Highway Infrastructure Privatization Act (HIPA), which would have allowed the private sector to issue tax-exempt debt for developing public highway infrastructure, was not included in TEA-21 legislation. The concept, however, was reintroduced in February 1999 by U.S. Senator John Chafee, Chairman of the Committee on Environment and Public Works, under S.470 and renamed the Highway Innovation and Cost Savings Act (HICSA). U.S. Representative Jennifer Dunn introduced a similar bill in the House (H.R.859). HICSA, which would contain the same principle concepts as HIPA, would amend the Internal Revenue Code of 1986 to allow tax-exempt private activity bonds to be issued for highway infrastructure construction. However, due to Senator Chafee's passing in October, 1999, the bill has not been advanced.

In basic terms, HIPA/HICSA creates an opportunity for private entities to issue tax-exempt debt for highway infrastructure projects. Current tax laws significantly limit the permissibility of tax-exempt debt for highway projects that are privately owned and/or operated. This program seeks to address the limitations imposed by the tax laws.

The key features of the program are listed below:

- HIPA would establish a program under which tax-exempt debt could be issued for privately owned and/or privately operated projects.
- Tax-exempt financing would be available for no more than 15 infrastructure pilot projects.
- Total face value of bonds issued under this program could not exceed $15 billion. This enables the U.S. Treasury to control the fiscal impact on the lost tax revenues resulting from the tax-exempt status of the interest from the bonds.
- Bond proceeds could not be used to acquire right-of-way.
- Selected projects would have to serve the general public, be on publicly-owned rights-of-way, eventually revert to public ownership, and be included in the state's 20-year transportation plan.
- Projects authorized under the program would be selected by the U.S. Secretary of Transportation, in consultation with the U.S. Secretary of Treasury.

This program may potentially become useful for the SCAG Region for highway projects such as toll roads or truck lanes where private sector intervention can be warranted.

Conclusion on Federal Opportunities

All of these innovative financing mechanisms can potentially accelerate important projects in the SCAG region that would otherwise take longer to implement or be delivered at all, as well as take advantage of today's costs. Each of these mechanisms involves some form of debt financing, which has been the method to get projects underway. The issue of securing a dedicated revenue stream to repay the debt becomes critical, as debt can only be useful if a steady stream of funds is available to pay it back.

Competition for these programs, both in state and nationally, would also need to be addressed, especially for programs like TIFIA that have caps on the level of financing. An underlying success factor that seems to be consistent for each of these programs is for the region to be prepared with an eligible project that has already garnered the consensus of the member jurisdictions.

State Legislation

In addition to federal funding opportunities, the Finance Task Force focused on various state legislative efforts to increase transportation funding for the region. One such effort involved the introduction of Assembly Bill (AB) 2742 during the last legislative session. Although this legislative initiative did not gain the full support necessary for passage, it appears that elements of AB 2742 were incorporated in the Governor's recent Traffic Congestion Relief Plan. The following provides a brief outline of AB 2742.

AB 2742 was an attempt to increase funding for transportation by capturing sales tax revenues on gasoline that are not currently being used for transportation purposes.[18] Additionally, this legislation was an attempt to achieve greater equity in the distribution of revenues from the state gas excise tax between the state, cities and counties.

AB 2742, sponsored by SCAG, pursued the following:

1. Shift 2.2 cents of the state excise gas tax to cities and counties for the maintenance of local streets and roads -- approximately $330 million.

2. Shift $330 million generated from the sales tax on gasoline that now goes to the state General Fund to the State Highway Account to offset the gas tax shift to local governments.

[18] The Governor's TCRP captures the state portion of gasoline sales tax revenues previously deposited into the General Fund – approximately $1 billion annually through 2005/6 – see section on alternative funding strategy for futher dicussion on TCRP's gas sales tax funding for transportation.

3. Shift $186 million generated from the sales tax on 27 cents of the 36 cents state and federal gas tax to the Public Transportation Account. Currently, the revenue generated from the sales tax on 9 cents of the gas tax, approximately $62 million, is allocated to the Public Transportation Account.

4. Allocate the $186 million exclusively by population. The existing revenue is allocated by a formula that takes into account population and farebox revenue.

5. Create a statewide transportation capital program that could generate up to $4 billion over five years for transportation facilities. After accounting for the allocation to the State Highway Account, $430 of gasoline sales tax monies remains in the General Fund. AB 2742 would allocate this revenue plus an additional $70 million of General Fund revenue to the State Highway Account annually to fund new transportation facilities. A fifty-percent match of state or federal funds would be required by localities and regions to use this revenue. Over five years, this proposal would generated approximately $4 billion for transportation investments.

Moreover, the Finance Task Force's legislative efforts focused on supporting initiatives to establish a less than two-thirds vote process for extending and/or imposing local sales taxes for transportation. Such efforts included supporting Senate Constitutional Amendment 3 (SCA 3). Although SCA 3 was not enacted, SCAG continues to support efforts to extend and/or impose local sales tax measures as indicated in the following discussion addressing SCAG's alternative funding strategy.

Public Funding Strategy

After reviewing innovative federal funding opportunities, state legislative measures, and alternative user fee structures for raising transportation revenues, the Finance Task Force formulated the following assumptions as a basis to develop SCAG's funding strategy:

1. Continue using state gasoline sales tax revenues for transportation purposes (extending the TCRP funding program beyond 2006).

2. Continue local sales tax measures for transportation where necessary.

3. Adjust the state motor vehicle fuel excise tax rate and user-fees to maintain historical purchasing power (pursue further study).

Descriptions of each component of SCAG's funding strategy and methodology for assessing the amount of revenues generated are further detailed in the following paragraphs.

Continue Using Revenues from the State Sales Tax on Gasoline for Transportation Purposes

AB 2928 (Torlakson), SB 1662 (Burton), and SB 406 (Ortiz) commit approximately $8.2 billion in new transportation funding statewide including approximately $5 billion for the Governor's Traffic Congestion Relief Program (TCRP). During fiscal year 2000-01, the Program appropriates $1.5 billion from the General Fund and transfers $500 million from state gasoline sales tax revenues to transportation. For the five year period thereafter (annually from 2001-02 through 2005-06), the state portion of gasoline sales tax revenues that were previously deposited into the General Fund will be dedicated to transportation. This state gasoline sales tax portion is estimated to be about $1 billion annually.[19]

As a part of SCAG's funding strategy, it is assumed that the region would benefit from the extension of this transfer of the state share of gasoline sales tax revenues from the General Fund to transportation. It is assumed that the extension period would begin in 2007. Accordingly, SCAG estimates that the region would receive approximately $6 billion in revenues from 2007 through 2025.

The revenue estimate is based on the annual $1 billion appropriation statewide provided by the legislation from 2002 to 2006. For the years beginning in 2007 through 2025, SCAG estimated its share of future annual appropriations through the development of a formula that is based on the forecasted gallons of fuel consumed in the region relative to the rest of the state. The share was estimated to be about 48 percent. This percentage was then applied to the current $1 billion estimate for gasoline sales taxes to generate annual revenues from 2007 through 2025. To account for historical growth in fuel consumption, the revenues were estimated to grow at about 2 percent annually through 2025[20].

Table 11

Estimated Additional Revenues:
Capturing Revenues from the State Sales Tax on Gasoline
Constant 1997 Dollars (In Billions)

County	Additional Revenues
Imperial	$0.060
Los Angeles	3.104
Orange	0.896
Riverside	0.776
San Bernardino	0.896
Ventura	0.239
Total	**$5.971**

[19] Of this $1 billion, $678 million will be allocated each year to fund the projects specified in the Governor's TCRP and the remaining funds will be allocated for local street and roads, transit and STIP projects.
[20] Nominal growth rate.

Continue Local Sales Tax Measures for Transportation

Local transportation sales taxes were imposed by majority vote in four counties within the SCAG region. These counties include Imperial, Orange, Riverside and San Bernardino. These local sales taxes are scheduled to expire within the next ten years. Currently, Ventura County does not impose a local transportation sales tax and Los Angeles County has two permanent local taxes (Propositions A and C).

These counties are subject to Proposition 218 in accordance with a California Supreme Court decision, which requires a two-thirds voter approval for the imposition, extension or increase of "special" taxes by a local government.

In recognizing the difficulty many of these counties would have in passing local sales tax initiatives due to the two-thirds voter approval requirement, the baseline revenue forecast included the assumption that these local (½ percent) sales taxes would expire. In addition, it was assumed that Ventura County would not impose such a sales tax.

Consequently, some of SCAG's legislative efforts focused on supporting initiatives to establish a less than two-thirds vote process for extending and/or imposing local sales taxes. Although recent legislative efforts to authorize or extend the local sales taxes with a less than two-thirds voter approval was not enacted, SCAG believes that removing this constraint during the period covered by the 2001 RTP is not unreasonable.

Of the four counties with existing transportation sales taxes, three – Imperial, Riverside and San Bernardino – are assumed to continue the existing taxes. Currently, Orange County anticipates the construction of proposed RTP projects without extending Measure M. Additionally, Ventura County does not have any immediate plans to pursue a local transportation sales tax.

By assuming the extension in the three counties where the local sales taxes are expected to continue, the region would recognize about $3 billion (1997 $) in additional revenues. This estimation is based on data collected from the county transportation commissions and from historical taxable sales. Accordingly, the assumed sales tax growth rates for the three counties are as follows:

Table 12

Assumed Sales Tax Growth Rates
(Used to Estimate Additional Revenues from Extension)

County	Growth Rate (%)
Imperial	2
Riverside	4
San Bernardino	4

Table 13 provides revenue estimates from the extension of the sales taxes for the three counties where they are expected to continue.

Table 13

Estimated Additional Revenues
Local Transportation Sales Taxes
Constant 1997 Dollars (In Billions)

County	**Additional Revenues**
Imperial	$0.07
Riverside	1.67
San Bernardino	1.71
Total	**$3.46**

The following information demonstrates the importance of continuing local transportation sales taxes within the SCAG region:

- Region-wide, approximately 70 percent of all the revenues are forecasted to come from local sources, namely the local transportation sales taxes and the Transportation Development Act revenues. Imperial County, where 19 percent of the revenues are local in origin, represents the low end of the range. Orange and Los Angeles counties, where about 74 to 76 percent of the revenues are forecasted to be local, represent the high-end of the range (*see pie charts in revenue section of this technical appendix*).

- In the SCAG Region, only Los Angeles County has permanent local transportation sales taxes (a 1 percent rate – a combination of two ½ percent measures). These taxes are estimated to generate about $30.1 billion over the forecast period (in constant 1997 dollars).

- Ventura County is the only county in the region without a local transportation sales tax. Local transportation funding in Ventura County currently represents about 33 percent of all the revenues in the County.

The following table compares the current forecast of revenues in each county, where the sales tax is scheduled to sunset, with the amount of revenues that would be generated should the local transportation sales tax be extended to 2025.

Table 14

With & Without the Extension of the Sales Tax 1997-2025 (constant 1997 $s in billions)				
County	**Sunset Date**	**Sales Tax Revenues, 1997-Sunset Date**	**Additional Revenue Resulting from Sales Tax Extension**	**Total**
Imperial	2010	$ 0.08	$ 0.07	$ 0.15
Orange	2011	$ 3.77	$ 0.00*	$ 3.77
Riverside	2009	$ 1.01	$ 1.67	$ 2.68
San Bernardino	2010	$ 1.24	$ 1.71	$ 2.95

* Not expected to be extended in Orange County.

Adjust the State Excise Motor Vehicle Fuel Tax Rate and User-Fees to Maintain Historical Purchasing Power.

State transportation revenues are collected primarily from the state excise fuel tax on motor vehicles. The current state excise fuel tax was last increased over a five-year window period from 1990 through 1994, when it was doubled from 9 cents to 18 cents per gallon.[21] If an assumption were made that the legislature would provide for a similar increase fifteen to twenty years later, between 2005 and 2010, the revenue stream for the RTP would be enhanced. In light of historical tax rate changes, it seems reasonable to assume further rate adjustments. The following table provides a chronological history of the State's gasoline excise tax rate adjustments:

Table 15

Chronology of the State's Excise Gas Tax Rate Adjustments	
Effective Date	**Tax Rate (per gallon)**
October 1, 1923 (fuel tax first imposed)	2 cents
July 29, 1927	3 cents
July 1, 1947	4.5 cents
July 1, 1953	6 cents
October 1, 1963	7 cents
January 1, 1983	9 cents
August 1, 1990	14 cents
January 1, 1991	15 cents
January 1, 1992	16 cents
January 1, 1993	17 cents
January 1, 1994	18 cents

Source: State Board of Equalization 1998-99 Annual Report (A-34)

[21] Effective August 1, 1990, the tax rate was increased from 9 cents to 14 cents per gallon. Effective January 1, 1991, the tax rate was increased to 15 cents per gallon. Effective January 1, 1992, the tax rate was increased to 16 cents per gallon. Effective January 1, 1993, the tax rate was increased to 17 cents per gallon. Effective January 1, 1994, the tax rate was increased to 18 cents per gallon. See state gas tax history table.

With the re-authorization of the federal transportation legislation scheduled for 2004 and the implementation of Governor Davis' Traffic Congestion Relief Plan, a fuel tax increase is reasonable to assume. The Finance Task Force, in coordination with other SCAG committees, approved moving forward with efforts to increase the 18-cent per gallon state fuel tax by five-cents in 2010, and by one cent annually from 2011 through 2015. This adjustment totals 10 cents.

The methodology for estimating the additional revenues required using Caltrans' fuel forecast for estimated gallons of motor vehicle fuel consumed in the region through 2025. For analysis purposes, a five-cent increase starting in 2010, and 1-cent increases each year thereafter through 2015, were applied to the consumption forecast. This calculation revealed that the tax adjustment strategy would generate about $15 billion through 2025 (in 1997 dollars). Table 16 provides the additional amount of revenues generated for each county, based on each county's proportion of fuel consumption forecasted by Caltrans.

Table 16

Estimated Additional Revenues:
Adjust State Motor Vehicle Fuel Excise Tax Rate and User-Fee
Constant 1997 Dollars (In Billions)

County	**Additional Revenues**
Imperial	$0.12
Los Angeles	$7.56
Orange	$2.48
Riverside	$1.95
San Bernardino	$2.29
Ventura	$0.68
Total	**$15.08**

An alternative to a statewide increase in the fuel tax would be to secure authorization for a regional fuel tax, similar to the authorization obtained by the San Francisco region. In 1997 the Metropolitan Transportation Commission (MTC), the San Francisco region's MPO, successfully sponsored AB 595 authorizing MTC to seek voter approval for a tax on gasoline sold in the Bay Area counties.

A regional fuel tax, under current constitutional provisions, would require a two-thirds vote of the regional electorate to be implemented. If the levy is characterized as a user fee, however, the SCAG region may be able to bypass the two-thirds vote requirement.

This component of the region's public funding strategy includes the option to further study a revenue raising mechanism on alternative fuel vehicles as the need arises. Due to state and federal air quality policies as well as technological advances, the automobile will likely become more fuel efficient and less reliant on gasoline.

Although this does not mean that the conventional gasoline fueled vehicle will disappear, it will likely continue to evolve as it has since its invention. The recent introduction of dual mode vehicles by Toyota and Honda are testament to the evolutionary character of the automobile. Moreover, the automobile industry is spending billions of dollars on R&D related to practical

alternatives to the internal combustion engine. Over the next decade this trend may accelerate. This evolution in technology may have its greatest initial impact in California, especially in Southern California.

Annual growth in gas tax revenues, which is relatively modest, may stabilize and then begin to decline. In the meantime, maintenance, operations and rehabilitation costs of the state highway system and local streets will likely continue to increase.

In order to offset a significant portion of this possible decline in gas tax revenues, SCAG recognized the importance of further studying the potential impacts on transportation revenues due to alternative fuel vehicle market penetration.

It is clearly important to understand that these revenues are affected by the actual market penetration rate of alternative fuel/fuel efficient vehicles. If the penetration rate were to be 2 to 5 percent, gasoline tax revenue loss would be minimal, not necessitating a revenue raising mechanism on alternative fuel vehicles. Certainly, there are other difficulties to address if the penetration rate were higher – that is, high enough to substantially reduce regional transportation revenues. There would be difficulties associated with the actual implementation of a revenue raising mechanism when many types of fuels and fueling methods may be available.

For instance, an equitable common tax base among the different fuel choices would need to be developed. This is especially problematic since some fuels such as gasoline and methanol are measured in gallons, while compressed natural gas is measured in cubic feet and electricity is measured in kilowatt hours. Preliminary analysis has been conducted on exploring a common tax base using a standard measure of energy that is applicable to each fuel type, such as British thermal units (BTUs). By applying a tax rate on the energy produced from each fuel, rather than on the different fuel measurements, a potential equitable method of collecting fuel revenues may be attained, regardless of the mixture of vehicle fuel that would be available on the market for commercial usage. However, this topic would require much further study for its feasibility.

Summary Table of the Funding Components

Table 17 below itemizes the funds generated from each component. Each of the components, taken together, make-up the region's public funding strategy. Additionally, table 18 provides SCAG's 2001 RTP regional checkbook with the public funding strategy.

Table 17

2001 RTP Public Funding Strategy *(Constant 1997 $)*	
Funding Component	**$**
Continue Transfer State Sales Tax Revenues on Gas to Transportation	5.97
Extend Local Transportation Sales Tax Measures	3.46
Adjust State Motor Vehicle Fuel Excise Tax Rate and User-Fees to Maintain Historical Purchasing Power	15.08
Total	**$24.51**

Table 18

2001 RTP Regional Checkbook by County												
County	**Baseline Revenues**		**Baseline Costs**		**Net Balance**		**Public Cost of New RTP Projects**		**Funding Shortfall**		**Public Funding Strategy**	
Imperial	$	0.78	$	0.64	$	0.14	$	0.38	$	(0.24)	$	0.24
Los Angeles	$	65.27	$	66.37	$	(1.09)	$	9.46	$	(10.55)	$	10.55
Orange	$	17.49	$	17.02	$	0.46	$	3.94	$	(3.47)	$	3.47
Riverside	$	5.91	$	6.10	$	(0.19)	$	4.20	$	(4.39)	$	4.39
San Bernardino	$	8.01	$	7.71	$	0.30	$	5.20	$	(4.90)	$	4.90
Ventura	$	2.49	$	2.30	$	0.19	$	1.15	$	(0.96)	$	0.96
Total	$	99.96	$	100.14	$	(0.18)	$	24.33	$	(24.51)	$	24.51

Notes:

1) Numbers may not add due to rounding.
2) Includes revenues from the Governor's Traffic Congestion Relief Plan. Local gas tax subventions are not included in the revenue forecast, assuming that the subventions are not used for "regionally significant" projects. The EPA's use of the term "regionally significant" is intended to include those transportation projects that would have significant impacts on regional travel, emissions, and air quality.
3) Baseline costs include current TIP (2001-2006) capital projects that are "regionally significant." Traffic Congestion Relief Plan projects are also included. Additionally, committed sales tax revenues and funds from other sources for Measure projects are included. Measure tax project costs are spread between "pay as you go" financing and debt financing. Includes anticipated new debt service issues during the RTP period. Also includes debt bonded against forecasted TCA toll revenues in Orange County. Also included are Operations and Maintenance expenses for both transit and roads, Caltrans 2000 SHOPP, and transit capital replacement/rehabilitation. Forecasted transit and roadway O&M and capital replacement are assumed for the existing SCAG regional transportation infrastructure and new capital projects in the 2001/2006 RTIP. See technical appendix for further information.
4) Revenues and Costs are in constant 1997 dollars, millions.
5) The region's public funding strategy does not assume the extension of Measure M in Orange County nor the imposition of a local transportation sales tax in Ventura County.

Public Funding Implementation Strategy

To realize this funding strategy, several activities must be undertaken, some almost immediately. The following provides a list of some actions to be taken:

Milestone	Action(s)	Year(s)
1.	Create a committee of Regional Council members to provide leadership and direction, on a continuing basis, for the overall implementation of the funding program.	2001-2002
2.	Undertake a region-wide, multiyear public awareness program to familiarize decision makers of the issues being addressed in the RTP and the importance of the funding strategies to regional mobility, economic well-being and to the quality of life.	On-going
3.	During the current legislative recess, initiate one-on-one communications with state legislators representing the region, to explain the long-term transportation requirements of the region and the funding options needed to address these requirements	On-going
4.	Create a regional partnership involving SCAG, the County Transportation Commissions, the sub-regions and private interests to advocate the implementation of the funding strategies.	2001-2002

SCAG believes that these four elements provide the framework for a multiyear implementation program. The funding components of the program would likely be implemented over the next five to ten years and would require the formation of coalitions both within the Southern California region and throughout the state. Each funding proposal has its own set of conditions that will influence implementation. Recognizing this, SCAG proposes the following actions:

1. ***Continue using the state tax revenues generated from the sale of gasoline for transportation purposes***. The Transportation Congestion Relief Program (TCRP) enacted by the legislature sets aside the revenues received from gasoline sales for annual appropriation to the program of projects, including transit operations, that comprise the TCRP. This is currently scheduled to continue until 2006. Prior to 2006, SCAG should begin informing the public and legislators of the value added to the regional transportation system from the additional revenues provided through the TCRP funding program. In addition, SCAG should jointly form coalitions with interest from throughout California to ensure the continuation of this new funding program. To this end, SCAG has introduced Assembly Bill 227 (Longville) which indefinitely extends the dedication of the sales tax on motor vehicle fuel for transportation purposes. Recently, the Assembly Transportation Committee overwhelmingly approved (vote 17-0) AB 227. A number of organizations, including the League of California Cities, California State Association of Counties, and the transportation commissions in the SCAG region, testified in favor of the bill.

Milestone	Action(s)	Year(s)
1.	Develop state/regional consensus	2001-2006
2.	Public education/outreach	2001-2006
3.	AB 227 (Longville)	2001-2002
4.	Extension of state sales tax on gasoline	2007

2. ***Join with the "self-help" counties and other groups to obtain authorization for a less than two-thirds vote requirement to continue the local transportation sales tax programs***. Local sales taxes have become a central feature of transportation funding over the last two decades in the SCAG Region and elsewhere in California. Since the mid eighties, $5.5 billion has been raised for transportation projects and services in the four counties in the region, which have sales taxes scheduled to expire in the next ten years. Other counties in California are encountering similar deadlines, making this a statewide issue. It should be noted that despite the existing two-thirds vote requirement, some counties in the SCAG region are planning to pursue reauthorization of their respective sales taxes. Pursuing reauthorization would entail a series of important actions including:

Milestone:	Action(s)
1.	Establish Measure Renewal Committee
2.	Campaign Finance
3.	Marketing/Public Awareness
4.	Surveys
5.	Expenditure Plan

6. Local Consensus
7. Ballot Measure by County CTC/Extension of local sales tax

3. ***Adjust the state fuel excise tax rate and user-fees to maintain historical purchasing power.*** To ensure adequate revenues for the RTP, SCAG proposes a five cents fuel tax increase in 2010 with an additional penny per year adjustment until 2015. By the year 2010, it will have also been about 16 years since the motor vehicle fuel tax was last increased in California. Clearly, there will be a statewide interest in increasing fuel tax revenues to offset the continuing decline in the revenue's purchasing power. An alternative would be to secure authorization for a regional fuel tax, similar to the authorization obtained by the San Francisco region. A regional fuel tax, under current constitutional provisions, would require a two-thirds vote of the regional electorate to be implemented. However, by characterizing the charge as a user-fee, the region may be able to bypass the two-thirds requirement.

   SCAG is currently pursuing efforts to further study potential decreases in transportation revenues. Assembly Concurrent Resolution 32 (Dutra) requests that the California Transportation Commission (CTC), in consultation with the California Department of Transportation (Caltrans) and regional planning agencies, prepare a study focusing on declining transportation revenues and remedies to address potential funding shortfalls.

Milestone	Action(s)	Year(s)
1.	Introduce ACR 32 (Dutra)	2001
2.	Study of transportation funding	2002-2003
3.	Subsequent revision of the Regional Transportation Plan to develop blueprint program of expenditures	2002-2009
4.	Develop state/regional consensus	2002-2009
5.	Evaluate whether to pursue state of regional fuel tax initiative	2005

Cost Estimation Methodology for Draft 2001 RTP Projects

Public cost information, for individual projects associated with the Draft 2001 RTP, were provided by the staff of implementing agencies and/or local county transportation commissions. Because many of these cost estimates were developed using a variety of techniques, they vary in detail and accuracy depending on the level of planning and the availability of information.

Where public cost information was not available (or not provided by implementing agencies), capital, operations and maintenance, as well as any associated revenue dollars were estimated for projects given descriptions as to location, extent of construction or service, and any other relevant information.

A system-level cost estimation approach was utilized. That is, cost estimates for candidate projects were generated from local project cost experience. Basic cost assumptions were derived by contacting appropriate city and county agencies as well as local county transportation commissions conducting similar work efforts or considering comparable aspects of local projects. This technique is primarily useful for long-range planning purposes requiring financial constraint, but lacking sufficient information to estimate detailed quantities and unit costs.

In system-level cost estimating, the basic unit of cost estimation for highway projects is miles of roadway constructed, reconstructed or resurfaced. The basic units for intersection work are the number of intersections improved and lane miles of highway added. For transit projects, the basic unit of cost estimation may include miles of track to be constructed or the number of vehicles to be purchased.

Although detailed engineering estimates are required on an individual project basis for funding allocation purposes, this system-level approach provides a reasonable range of costs for a package of projects given that costs will vary with location issues and design considerations. The following provides some of the cost assumptions utilized for the Draft 2001 RTP. The cost information is provided by mode on a per unit basis.

Mode	Cost Item	Unit	Average Est. Cost (1997 $ unless otherwise noted)
HOV	Restriping and minimal median reconstruction	Lane Mile	$ 1,100,000 to $ 2,000,000
	Basic median reconstruction	Lane Mile	$ 2,100,000 to $ 4,000,000
	General lane addition (*median reconstruction , some right of way acquisition and minimal bridgework*)	Lane Mile	$ 4,200,500 to $ 4,400,000 Note: According to Caltrans Dist. 8, high estimate can reach $10M.
	Transitway construction and extensive reconstruction efforts	Lane Mile	$ 27,000,000
	Major reconstruction efforts (e.g. segments of I-5)	Lane Mile	$ 34,000,000
	Intermediate general reconstruction	Lane Mile	$ 11,000,000
	Maintenance	Lane Mile	$ 25,000
HOV Connectors	Freeway connector	Per Direction	$ 32,000,000 to $ 47,000,000
Mixed Flow	Freeway lanes - assume same costs as HOV lane additions	Lane Mile	$ 4,200,500 to $ 4,400,000 Note: According to Caltrans Dist. 8, high estimate can reach $10M.
	Maintenance	Lane Mile	$ 25,000

Mode	Cost Item	Unit	Average Est. Cost (1997 $ unless otherwise noted)
Arterials	The cost estimate includes intersection and signal work. This unit cost should be increased by approximately 76% to account for average cost of ROW, contingency, utility relocation, etc. (*Estimates may vary by as much as 30% depending on location and type of arterial*).	Lane Mile	$ 1,100,000 to $ 1,900,000* *The high range includes ROW, etc.
Arterial HOV	This cost should be increased by about 76% to account for average cost of ROW, contingency, utility, relocation, etc.	Lane Mile	$ 325,000
Busway / Transitway	Busway construction	Lane Mile	$ 16,000,000 to $ 27,000,000
	Aerial structure with full grade separation	Lane Mile	$ 74,000,000
	Bus Capital, 12 year lifecycle	Per Bus	$ 370,000
	Operations	Per Passenger Mile	23 cents
Interchange/ Ramps	Basic Interchange project		$ 21,000,000
	Freeway to freeway project		$ 79,000,000
	Typical ramp project with improvements to two directions		$ 4,600,000
	Ramp project with improvement to one direction		$ 2,300,000
Toll Lanes	Same cost as Mixed Flow and HOV	Lane Mile	$ 4,200,500 to $ 10,000,000
Truck Lanes	Truck Lane	Lane Mile	$ 27,000,000
	Interchange (depends on location and age of freeway)		$ 16,000,000 to $ 32,000,000
	Maintenance per year	Lane Mile	$ 32,000
	Note: On routes with public subsidy, trucks pay roughly 30% of construction costs.		
Intermodal & Goods Movement	Bridge		$ 10,500,000
	Grade Separation	Per Separation	$ 14,000,000 to $ 20,000,000
	Parking space at transit station	Per Space	$ 3,200
	Rail Platform		$ 970,000

Mode	Cost Item	Unit	Average Est. Cost (1997 $ unless otherwise noted)
	Bus Transfer Facility		$ 370,000
	Intermodal facility		$ 53,000,000
	Annual O&M	Per Rail Station	$ 67,000
	O&M for parking	Per Space	$ 120
Commuter Rail	5 car consists train set	Per Train Set	$ 12,000,000
	Construct rail line	Per Mile	$3.6 to $5.2 million per mile (single track)
	Rehab of rail line	Per Mile	$1.8 to $3.2 million per mile (single track)
	O&M alternative 1	Per Train Mile	$47 (*Metrolink – roughly 1,809,500 annual train miles for 28 train sets*)
	O&M alternative 2	Per Passenger Mile	30 cents
	O&M alternative 3	Per Train Per Year	$ 2,500
	Revenues		46% to 53% farebox recovery
Urban Rail	Light rail construction including station development	per mile	$ 42,000,000 to $ 67,000,000
	Aerial structures including station development	per mile	$ 81,000,000
	(subway w/station) Heavy rail construction including limited tunneling and station development	per mile	$ 280,000,000
	Rail Cars	per car	$ 3,700,000
	(5 cars consist train set) Light rail trains to run on traditional freight lines.	per train with 5 passenger cars	$ 17,000,000
	O&M alternative	per passenger mile	39 cents
	O&M light rail	per vehicle hour	$ 500
	O&M heavy rail	per vehicle hour	$ 1,200,000
	Revenues		15% to 30% farebox

Mode	Cost Item	Unit	Average Est. Cost (1997 $ unless otherwise noted)
High Speed and Other Rail	Track construction	per mile	$ 24,000,000
	Right-of-way	per mile per track	$ 2,000,000
	Station and parking lot costs are same as Intermodal & Goods Movement.		
	O&M for parking	per space	$ 120
	6 car consist train set with engine and cab car.	per train set	$ 17,000,000
	O&M	per pass mile	29 cents
Bus Transit	Bus Capital, 12 year lifecycle	per bus	$ 370,000 to $ 390,000
	Operating	per hour	$ 50 to $ 70
	Revenues		26% farebox
	note: assume Express service 6.5 hours of operation, 5 days/week, 51weeks/year		
	Rapid Bus Capital	per mile	$ 500,000 *(Note: LACMTA estimate)*
	Rapid Bus O&M	per mile	$ 310,000 *(Note: LACMTA estimate*
	Rapid Bus (Capital/O&M)	per mile	$ 11,000,000 *(Orange County estimate includes extensive infrastructure work)*

Sources: Caltrans Local District Offices, Metrolink, LACMTA, and other local CTCs.

Investments in Freight Movement

There is a significant amount of money funding transportation investments for freight movement that are not traditionally captured in the Regional Checkbook and the RTP. These monies can be both public and private expenditures for port, airport, rail and trucking operations. Projects include capital improvements, minor mitigation of traffic flow impairments, and capital maintenance. The dollars do not flow through the State Transportation Improvement Program (STIP) but instead result from user/access fees, grant funding, bonding on future revenues and private sources. The ports and airports, supported by rail and trucking, are an engine of growth to the regional economy and result in substantial benefits to the nation.

International trade flowing through regional ports and airports is vital to the local and national economies. As a gateway to the Pacific Rim, the SCAG region is a trade center producing and using goods, as well as a transshipment center for goods going to and from other areas of the country. Goods from throughout the nation are brought into the region by truck and rail for export through the ports and airports. Alternately, goods from the Pacific Rim are shipped through the region to the rest of the nation. Of merchandise exports, it is estimated that 54% are regionally produced and 46% are transshipped. Regionally produced goods account for approximately 6% of the nation's exports. The volume of international trade is expected to double within the next twenty-five years as trade borders continue to open and global markets expand.

Growth in freight movement is expected to increase greatly as trade borders continue to open and the global marketplace expands. The transportation industry, as a percent of gross domestic product (GDP), has recently grown from 5.04% in 1992 to 5.13% in 1997. This rate of growth is expected to be even greater in the SCAG region as the ports of Los Angeles and Long Beach, as well as the airports at Los Angeles (LAX) and Ontario, are primary gateways for goods exchange to Pacific Rim nations.

The investment in freight transportation maintenance and improvements puts a substantial amount of money into the local economy. The economic multiplier for transportation improvements has been calculated to be 2.3. This implies that for every dollar invested in transportation regionally through inputs such as labor and building materials, 2.3 additional dollars are reinvested into the economy. While this rate varies depending on the improvement, given that certain goods (train cars, cement, etc.) are produced outside the region, a high proportion of the funds would remain local.

The following is a discussion of the type and level of transportation improvements anticipated by the purveyors of various transportation services in the region. Most of the investments identified will occur over the next ten years and it is assumed that beyond that time a similar level of investment will occur annually through the plan period. The data provided is an estimate from information available for use in the RTP. However, the provision of additional capacity and local access improvements are dependent on future demand which cannot be accurately determined at this time. Demand will vary based on the tonnage of freight movement through the region and the type of goods that will be moved.

Ports

There are two primary ports of entry in the SCAG region for shipments from the Pacific Rim and a third port that provides additional capacity for freight movement. The Ports of Long Beach and Los Angeles have been investing heavily in multi-modal capacity enhancements to meet current freight demand and to anticipate demand increases over the next two decades. Similarly but on a much smaller scale, the Port of Hueneme has been investing in on-site and site access improvements. Both the Port of Los Angeles and the Port of Long Beach are working with the Alameda Corridor Transportation Authority (ACTA) to consolidate rail movements for container cargo to and from the ports. The total investment for this project is expected to be $2.4 billion, which is focused on rail upgrades, rail and roadway grade separations and intermodal connections. The Alameda Corridor project is discussed in greater detail in Section V in the RTP.

Port of Los Angeles

The majority of the funds to be expended on land side transportation is for on-site highway and rail infrastructure, and ground access to the port. Since 1997 there have been major investments in land side and on-dock transportation to support the expansion of shipping terminals. Most of these projects will be completed within the next three to five years. The most substantial terminal expansion was for APL, completed at the end of 1997 for approximately $300 million. Completed shortly thereafter was APL's on-dock rail facility and rail connector to the Alameda Corridor. Two additional on-dock rail yards have been completed, Terminal Island facility with a container transfer operation($128 million) and a facility in the West Basin ($23 million). A new train and truck corridor for $40 million and a $15 million expansion of existing facilities will be completed within the next three years.

Other rail infrastructure improvements include: 1) the expansion and upgrade of rail facilities ($20 million) over the next three to five years; 2) lead track work ($4 million) recently completed; and an additional rail yard within two years ($10 million). Over the next 25 years, the port would expect to invest approximately $40 million in rail upgrades.

Highway improvements include the Harry Bridges Boulevard reconstruction ($15M) to be completed within two years and general highway infrastructure improvements. These improvements to be completed within the next year would provide better highway links to container yards ($60 million). The only additional project foreseen at this time is a highway technology joint effort with the Port of Long Beach. This would provide signage and signalization on access highways to the ports ($10 million).

Port of Long Beach

The Port of Long Beach has expended over $1.1 billion on terminal and ground access projects within the last ten years. The majority of improvements are within the port but roadway improvements occured along site access routes in the vicinity. The terminal projects included wharfs, on-dock railyards, and terminal gates. The ground access projects included: regionally

significant rail/highway grade separations, State freeway/highway improvements, and rail projects (near-dock railyards and mainline rail facilities). The Pier A Terminal ($287 million) was the most recent major terminal project, which was completed in 1997 and included an on-dock railyard. Over the past decade, the Port constructed five major rail/highway grade separation projects ($150 million). The rail mainline that was grade separated as part of these projects is the extension of the Alameda Corridor into the Port of Long Beach. One of these grade separation projects involved the re-construction of freeway on/off ramps with I-710, and is located on the National Highway System (NHS). The last grade separation project, Anaheim Street ($37 million), was completed in 2000 and is on the southern terminus of the Alameda Corridor. The Port of Long Beach has also spent over $4 million the last three years on improvements to Ocean Boulevard.

The Port of Long Beach will also be constructing two more major projects on Ocean Boulevard within the next three years: a major interchange with the Terminal Island Freeway (SR 47) which is a TEA 21 "High Priority Project," and the widening of the Gerald Desmond Bridge which is on State Route 710, and connects with the I-710. The Port will contribute approximately $3 million towards these two projects. The Port also completed in 1997 a near-dock railyard ($15.2 million), which directly connects to the Alameda Corridor and is vital to its success.

To construct these terminal and roadway projects, the Port is presently $1.1 billion in debt. To accommodate the expected growth in international trade over the next twenty years, the Port will need to spend almost $2 billion on seven major terminal and rail projects. This amount does not include the cost of additional roadway projects that will be needed to support this growth. One of these terminal projects, Pier T, is currently under construction and will cost $873 million, including an on-dock railyard. The Port is also planning to expand the Pier B Railyard at a cost of $62 million. Additionally, the Port is proposing a major intelligent transportations system project in conjunction with the Port of Los Angeles.

The current Port of Long Beach debt from transportation infrastructure results in payments for debt service that equal 34% of port revenues. The level of debt in ten years of $2.5 billion, after constructing the proposed terminal and rail projects, will require 60% of port revenues for debt service.

Port of Hueneme

The Oxnard Harbor District anticipates spending $20 million over the next ten to fifteen years to enhance freight movement for the Port of Hueneme. Additionally there is a need to rebuild at least one of the existing two wharfs to maintain port operations, since the wharfs are nearly thirty years old. This would cost in the range of $50 million. This does not address the growth potential nor the existing demand that is currently beyond the capacity of the port. Unlike the focus of the other two ports on container ships, the port of Hueneme handles mostly neo-bulk cargo such as boxed fruit from South America in pallets and automobiles from Asia. Transportation improvements focus on facilitating this break bulk cargo and on site access for trucks.

The projects projected within the $20 million identified above include:

1. Terminal to store autos
2. Rail car unloading area
3. New refrigerated shed
4. Participation with other agencies to extend and widen Rice Avenue and its interchange with Highway 101.
5. Dredging project
6. Reinforcement of the wharfs
7. Intermodal rail yard
8. Wharf improvements on adjacent Naval properties concurrent with agreements to extend the port's capacity

Airports

Airports in the region are constantly upgrading facilities and providing ground access improvements to meet the existing freight and passenger movement demands in the region. Several of the airports are addressing future demand since shipments are being lost to other regions given a lack of local capacity. The freight airports in the region are primarily Los Angeles International Airport (LAX) and Ontario International Airport, and to a much lesser extent John Wayne, Long Beach and Burbank Airports. All airports in the six-county region provide for limited freight movement and passenger movements via smaller aircraft. Expenses will occur at these airports to facilitate cargo operations but the levels should be minimal in comparison to LAX and Ontario, which handle nearly 95% of the regional air cargo. However, freight related infrastructure projects, such as a $2.7 million cargo ramp planned at Palmdale Regional Airport, are expected at many of these airports.

Los Angeles International Airport (LAX)

A variety of projects are expected at LAX to support on-going operations for passenger and freight movement. The LAX Master Plan currently underway addresses future growth at the airport as proposed by the airport commissioner's office (verify with Alan or Mike) and is discussed elsewhere in this document. Even with a new master plan in place, projects will be undertaken throughout the plan period to address needs identified by market demand.

Projects proposed for LAX can be either capital projects as contained in the Capital Improvement Program or mitigation projects that are budgeted annually. The mitigation budget ranges between $1 million and $6 million with an average of $2 million per year. Mitigation are on-site projects and those that improve airport site access including parking projects, lighting and signage, two Intelligent Transportation Systems (ITS – signal timing, changeable message signs, cameras, automatic vehicle identification) projects and a Transportation Operations Center with five computer stations for this year.

Capital improvements proposed over a three-year period include airfield projects ($115.2 million), terminal projects ($197.2 million), access and parking projects ($33.5 million), major maintenance ($12.8 million), and other projects ($465.7 million). Freight-related projects fall within the "other " category and include replacement of a cargo building ($17.3 million),

providing the cargo building with an elevated transfer vehicle system to support movement of cargo from aircraft ($5 million), air freight building remodel ($4.2 million), two freight building demolitions ($3.1 and $3.6 million) and freight building replacement ($21.8 million).

Ontario International Airport (ONT)

The Ontario International Airport has recently constructed two new terminals with associated land side improvements to facilitate traffic flow. ONT is currently in the process of widening Airport Drive from two to six lanes westerly to Vineyard and Grove, which are the primary ground access routes to the airport ($15.5 million). New parking lots are proposed to handle the additional passenger demand. Phase I provides 2,000 spaces within a parking structure to be built-out in 2002 ($4.9 million). Phase II provides 1,600 spaces with a build-out of 2004 ($4.3 million). To further support ground access, an Automated Vehicle Identification (AVI) system will be employed including transponders, readers and computer support ($0.6 million). New technologies will also be instituted over a five year period to promote multi-occupant vehicles, reduce circulating vehicles and vehicle idling emissions and to direct parking ($1 million)

Several freight movement projects are planned over the next few years. Phase 2 of the Air Cargo Apron and Taxiway project ($5.5 million) expands the existing apron and taxiway to accommodate four wide-body aircraft specially used for cargo movement. Air cargo facilities will be developed on 11.3 acres as part of this project. A second project improves Hangar 20 as the new location for belly cargo operations ($1 million). The hangar will include a loading dock with six bays and office space for each airline company.

Rail

Freight movement within the region is provided by rail and by highway. While highway demand and improvements are traditionally addressed in the RTP, rail improvements are generally limited to passenger demand (commuter and inter-city service). The region is served by the Union Pacific (UP) and the Burlington Northern Santa Fe (BNSF) railroad companies. Both require expansion of track capacity in critical locations and have plans to address these needs. In addition, increased inter-modal facility capacity is necessary to meet the on-going freight movement needs particularly in the Inland Empire.

The improvements are anticipated over the next five to ten years. The planned intermodal facilities will provide for an additional movement of 1.6 million units annually. With existing movements of 3.5 million units in the year 2000 and a 5% annual increase anticipated, this new capacity would be fully utilized within ten years. Clearly additional capacity would be required to address tonnage growth between 2010 and 2025.

On-going operations and maintenance costs and capital maintenance expenditures are substantial and will continue over the plan period. The value of investment isn't available at this time. Much will depend on: 1) the level of international traffic; 2) penetration of the long haul truck market; and 3) conversion of materials and goods from box car load traffic to container cargo. Since container usage is more cost efficient, there is a trend towards inter-modal use of containers for goods other than bulk commodities (e.g. gravel, borax). Box cars may need

limited replacement over the next 24 years, while the need for container cars and inter-modal capacity will grow substantially.

Union Pacific Railroad (UP)

The UP railroad expects to double track the line in Riverside and Imperial counties from Beaumont to Yuma for a project cost of $325 million. Existing inter-modal facilities need to be expanded in the short-term to address current demand ($25M) and a location for a new facility needs to be determined. This facility would be located in the Inland Empire on an approximately 300-acre parcel. Total fees for land acquisition and facility development are estimated at $250 million

Burlington Northern Santa Fe Railroad (BNSF)

The BNSF railroad anticipates the need for a third main track along Cajon Pass adjacent to the Interstate 15 freeway ($250M). This would provide additional capacity for the BNSF and for the UP which has trackage rights. The BNSF will also need to increase inter-modal facility capacity, most likely through the acquisition of a 300-acre site providing for the handling of 800,000 additional units annually. The estimated cost for land and facility development is $250 million.

Trucking

The trucking industry foresees significant growth in goods movement for imports and exports to the Pacific Rim, providing access to goods for the entire nation and to meet demand within the region. Freight movement to and from regional airports will increase along with the growth of industries in the local economy. National demand for goods will parallel the increased demand for capacity at the ports from Pacific Rim trade. Regional demand for goods will grow with the population increases anticipated through 2025.

The increased demand will require upgrading and expanding private trucking facilities and providing for site access improvements. Additionally, purchase and replacement of vehicles and on-going operations and maintenance will see significant increases through the plan period. These investments support the local and national economy by efficiently moving goods.

The amount of transportation investments by private firms cannot be accurately estimated. Attempts to identify the type and level of investment by freight movement operators were not successful. Operators typically identify improvements needed over the next one to three years or understand what improvement is required to increase the next increment of capacity. This may occur by adding cargo bays, clearing on-site access constraints, purchasing equipment for the loading dock, reorganizing labor or moving to a new facility. The type of improvement is varied but the need for private investments to handle the growing demand for freight movement is evident.

Conclusion

The expected increase in demand for freight movement through the region will require significant investments by freight operators of every transportation mode. Investments are typically anticipated over the near to mid-term as planning beyond the next ten years doesn't generally occur. Substantial further investment over the next twenty-four years of the RTP is necessary to keep the region and the nation globally competitive.

Many of these investments are provided above. They are projects that go beyond what is traditionally identified in the RTP. This means that state and federal funding is limited for these operators and that additional sources need to be explored. While all operators charge fees for services, insufficient monies and legislated restrictions on funding uses result in under-funded transportation infrastructure needs.

Regional Checkbook in 5 Year Increments

Revenues	1997-2000	2001-2005	2006-2010	2011-2015	2016-2020	2021-2025	Total
Imperial	224	185	127	95	87	62	781
Los Angeles	12,348	12,889	10,162	10,054	10,619	9,203	65,275
Orange	3,956	3,778	3,807	2,149	2,120	1,675	17,485
Riverside	1,233	1,505	998	666	742	766	5,909
San Bernardino	1,686	2,166	1,478	921	940	823	8,013
Ventura	452	495	422	408	400	316	2,494
Total	19,899	21,018	16,994	14,294	14,907	12,844	99,956

Costs	1997-2000	2001-2005	2006-2010	2011-2015	2016-2020	2021-2025	Total
Imperial	111	153	148	118	57	54	640
Los Angeles	10,827	12,758	11,708	12,182	9,589	9,305	66,368
Orange	3,571	3,647	3,820	2,944	1,516	1,523	17,022
Riverside	758	1,068	1,173	1,006	910	1,182	6,097
San Bernardino	963	1,800	1,874	1,396	863	815	7,711
Ventura	354	402	432	431	331	353	2,303
Total	16,584	19,828	19,155	18,077	13,266	13,232	100,141

Checkbook without additional revenues	1997-2000	2001-2005	2006-2010	2011-2015	2016-2020	2021-2025	Total
Imperial	113	32	(21)	(23)	30	9	141
Los Angeles	1,521	131	(1,546)	(2,127)	1,030	(102)	(1,093)
Orange	385	131	(13)	(795)	604	151	463
Riverside	475	437	(175)	(340)	(168)	(416)	(187)
San Bernardino	723	366	(396)	(476)	77	8	302
Ventura	98	93	(10)	(23)	69	(37)	190
Total	3,315	1,190	(2,160)	(3,783)	1,641	(388)	(185)

Rolling Totals without additional revenues	1997-2000	2001-2005	2006-2010	2011-2015	2016-2020	2021-2025	Total
Imperial	113	146	125	102	132	141	141
Los Angeles	1,521	1,652	106	(2,021)	(991)	(1,093)	(1,093)
Orange	385	516	503	(292)	312	463	463
Riverside	475	912	737	397	229	(187)	(187)
San Bernardino	723	1,089	692	217	294	302	302
Ventura	98	191	181	158	227	190	190
Total	3,315	4,505	2,345	(1,438)	203	(185)	(185)

Additional Revenues	1997-2000	2001-2005	2006-2010	2011-2015	2016-2020	2021-2025	Total
Imperial	-	-	29	70	71	69	239
Los Angeles	-	-	1,814	2,852	3,000	2,889	10,554
Orange	-	-	597	939	987	951	3,474
Riverside	-	-	564	1,233	1,296	1,293	4,386
San Bernardino	-	-	647	1,373	1,443	1,436	4,900
Ventura	-	-	165	259	272	262	958
Total	-	-	3,815	6,726	7,070	6,900	24,512

Revised Checkbook with Additional Revenues	1997-2000	2001-2005	2006-2010	2011-2015	2016-2020	2021-2025	Total
Imperial	113	32	8	47	102	77	380
Los Angeles	1,521	131	268	724	4,030	2,786	9,461
Orange	385	131	584	144	1,591	1,102	3,937
Riverside	475	437	389	893	1,128	877	4,199
San Bernardino	723	366	251	898	1,520	1,444	5,202
Ventura	98	93	155	236	341	226	1,149
Total	3,315	1,190	1,655	2,943	8,712	6,512	24,327

Rolling Totals	1997-2000	2001-2005	2006-2010	2011-2015	2016-2020	2021-2025	Total
Imperial	113	146	154	201	303	380	380
Los Angeles	1,521	1,652	1,920	2,645	6,674	9,461	9,461
Orange	385	516	1,100	1,244	2,835	3,937	3,937
Riverside	475	912	1,301	2,194	3,322	4,199	4,199
San Bernardino	723	1,089	1,340	2,237	3,758	5,202	5,202
Ventura	98	191	346	582	923	1,149	1,149
Total	3,315	4,505	6,160	9,103	17,815	24,327	24,327

Rolling total shows when counties actually will have available revenue to build additional projects on a pay as you go basis after paying off RTIP/Governor/TEA projects and O&M/Rehab./Replacement expenses.

Notes: RTIP spread over 4 periods, between 1997-00 through 2011-15

Gov's Projects spread over 3 periods, between 2001-05 through 2011-15

Revenue Forecast for SCAG 2001 RTP
County by County Revenue Forecast, 1997-2025
Millions (in constant 1997 dollars)

Funding Source	County						
	Imperial	Los Angeles	Orange	Riverside	San Bernardino	Ventura	Total
Local Sources							
TDA	$66.9	$7,554.3	$3,041.1	$1,302.3	$1,515.5	$638.9	$14,118.9
Local Sales Tax	76.6	30,106.1	3,722.4	1,010.3	1,240.9	0.0	36,156.3
Farebox	5.5	9,379.0	1,542.4	870.1	824.1	135.2	12,756.3
Local Agency Funds [1]	0.0	1,153.7	3,492.5	0.0	0.0	0.0	4,646.2
Miscellaneous Funds [2]	0.0	1,121.8	1,084.3	56.5	87.7	53.7	2,404.0
Subtotal	148.9	49,314.9	12,882.7	3,239.2	3,668.3	827.8	70,081.8
State Sources							
STIP, Regional	172.7	3,671.5	1,153.8	756.0	942.2	470.2	7,166.4
STIP, Interregional	151.3	557.1	141.3	268.5	463.8	125.3	1,707.2
Traffic Congestion Relief	8.0	1,447.5	202.1	91.0	160.8	12.0	1,921.4
STA	4.5	601.0	128.2	27.3	68.1	27.8	857.0
TCI/Prop. 116	0.9	68.7	89.6	10.9	34.5	3.4	208.1
SHOPP/O&M	256.9	2,033.9	408.1	590.6	1,510.3	464.2	5,264.1
Subtotal	594.4	8,379.7	2,123.1	1,744.3	3,179.8	1,102.9	17,124.2
Federal Sources							
RSTP	23.3	1,360.9	371.4	259.0	320.7	142.5	2,477.8
CMAQ	0.0	1,289.9	471.9	249.8	308.3	143.4	2,463.3
Local Assistance [3]	11.0	631.6	125.7	125.5	163.1	94.1	1,151.0
Sec. 5309	0.0	1,334.6	949.8	70.4	94.0	14.0	2,462.8
Sec. 5307 [4]	3.3	2,963.2	560.1	221.0	278.7	169.0	4,195.2
Subtotal	37.5	7,580.2	2,478.9	925.5	1,164.9	563.0	12,750.1
Total	$780.8	$65,274.8	$17,484.7	$5,909.1	$8,013.0	$2,493.7	$99,956.0

Notes:

[1] Includes Orange County Gasoline Tax Fund and TCA public toll road user revenues; and local contributions to committed programs.

[2] Includes transit advertisement and auxiliary revenues, lease revenues and interest and investment earnings.

[3] Includes programs such as Regional Transportation Enhancements, Highway Bridge Rehab., Grade Crossings and Hazard Elimination. Also includes Federal High Priority Projects for the region, other federal funds for specific projects (e.g. Alameda Corridor) and MTA clean fuels program.

[4] Includes Section 5311 (rural operating) funds for Imperial and Riverside Counties.

Revenue Forecast for SCAG 2001 RTP
County by County 5-Year Incremental Forecast, 1997-2000
Millions (in constant 1997 dollars)

	County						
Funding Source	Imperial	Los Angeles	Orange	Riverside	San Bernardino	Ventura	Total
Local Sources							
1 TDA	$12.9	$1,036.8	$337.0	$156.9	$200.0	$89.0	$1,832.6
2 Local Sales Tax	28.3	4,294.0	1,619.1	321.9	399.7	0.0	6,663.0
3 Farebox	1.0	1,052.9	124.1	23.7	31.5	8.7	1,241.9
4 Local Agency Funds [1]	0.0	1,083.9	624.8	0.0	0.0	0.0	1,708.8
5 Miscellaneous Funds [2]	0.0	172.2	133.1	2.9	7.8	1.7	317.7
Subtotal	42.2	7,639.8	2,838.2	505.4	638.9	99.4	11,763.9
State Sources							
6 STIP, Regional	37.5	1,523.7	506.6	149.2	357.3	117.5	2,691.8
7 STIP, Interregional	80.7	156.0	19.9	94.4	92.5	22.2	465.7
8 Traffic Congestion Relief	0.0	155.1	16.4	0.0	0.0	0.0	171.6
9 STA	0.9	130.5	21.0	8.9	12.7	5.3	179.4
10 TP&D/Prop. 116	0.9	68.7	0.0	10.9	34.5	3.4	118.5
11 SHOPP/O&M	54.5	636.9	140.2	224.1	276.4	99.1	1,431.1
Subtotal	174.5	2,670.9	704.2	487.5	773.4	247.5	5,058.0
Federal Sources							
12 RSTP	4.6	371.8	111.1	49.1	59.5	28.1	624.2
13 CMAQ	0.0	453.9	129.3	56.1	67.0	26.8	733.2
14 Local Assistance [3]	1.9	280.2	40.8	51.8	71.1	13.7	459.4
15 Sec. 5309	0.0	207.3	12.3	8.3	8.4	1.8	238.2
16 Sec. 5307 [4]	0.5	724.0	119.7	74.9	68.0	34.9	1,021.8
Subtotal	7.0	2,037.2	413.2	240.2	274.0	105.3	3,076.9
Total	$223.7	$12,347.9	$3,955.5	$1,233.2	$1,686.3	$452.2	$19,898.8
Percent of Total	1.1%	62.1%	19.9%	6.2%	8.5%	2.3%	100%
Grand Total							$19,898.8

Notes:

[1] Includes Orange County Gasoline Tax Fund and TCA public toll road user revenues; and local contributions to committed programs.

[2] Includes transit advertisement and auxiliary revenues, lease revenues and interest and investment earnings.

[3] Includes programs such as Regional Transportation Enhancements, Highway Bridge Rehab., Grade Crossings and Hazard Elimination. Also includes Federal High Priority Projects for the region, other federal funds for specific projects (e.g. Alameda Corridor) and MTA clean fuels program.

[4] Includes Section 5311 (rural operating) funds for Imperial and Riverside Counties.

Revenue Forecast for SCAG 2001 RTP
County by County 5-Year Incremental Forecast, 2001-2005
Millions (in constant 1997 dollars)

	County						
Funding Source	Imperial	Los Angeles	Orange	Riverside	San Bernardino	Ventura	Total
Local Sources							
1 TDA	$12.4	$1,167.2	$354.2	$198.1	$235.3	$97.5	$2,064.6
2 Local Sales Tax	27.3	4,622.4	1,015.6	406.8	457.6	0.0	6,529.8
3 Farebox	1.2	1,518.7	193.0	53.7	84.7	21.0	1,872.4
4 Local Agency Funds [1]	0.0	47.9	950.1	0.0	0.0	0.0	998.0
5 Miscellaneous Funds [2]	0.0	244.9	149.0	5.9	13.0	5.4	418.2
Subtotal	40.8	7,601.1	2,662.0	664.5	790.6	123.9	11,883.0
State Sources							
6 STIP, Regional	41.2	974.8	261.5	292.9	247.8	125.4	1,943.6
7 STIP, Interregional	48.4	143.0	49.0	81.4	173.9	24.3	520.1
8 Traffic Congestion Relief	6.8	1,250.4	185.6	86.8	130.6	12.0	1,672.2
9 STA	0.9	144.3	24.0	5.7	17.2	5.6	197.7
10 TP&D/Prop. 116	0.0	0.0	2.2	0.0	0.0	0.0	2.2
11 SHOPP/O&M	39.8	625.9	123.4	134.9	502.8	94.9	1,521.8
Subtotal	137.2	3,138.4	645.7	601.8	1,072.3	262.2	5,857.6
Federal Sources							
12 RSTP	4.6	377.0	100.2	69.1	86.6	28.1	665.6
13 CMAQ	0.0	458.4	131.9	69.5	83.9	28.6	772.3
14 Local Assistance [3]	2.2	200.9	39.2	37.8	44.4	16.2	340.6
15 Sec. 5309	0.0	375.5	54.8	20.7	22.9	4.1	478.0
16 Sec. 5307 [4]	0.6	737.4	144.4	41.2	64.8	32.2	1,020.5
Subtotal	7.4	2,149.1	470.5	238.3	302.6	109.2	3,277.1
Total	$185.4	$12,888.6	$3,778.2	$1,504.7	$2,165.5	$495.3	$21,017.7
Percent of Total	0.9%	61.3%	18.0%	7.2%	10.3%	2.4%	100%
Grand Total							$21,017.7

Notes:

[1] Includes Orange County Gasoline Tax Fund and TCA public toll road user revenues; and local contributions to committed programs.

[2] Includes transit advertisement and auxiliary revenues, lease revenues and interest and investment earnings.

[3] Includes programs such as Regional Transportation Enhancements, Highway Bridge Rehab., Grade Crossings and Hazard Elimination. Also includes Federal High Priority Projects for the region, other federal funds for specific projects (e.g. Alameda Corridor) and MTA clean fuels program.

[4] Includes Section 5311 (rural operating) funds for Imperial and Riverside Counties.

Revenue Forecast for SCAG 2001 RTP
County by County 5-Year Incremental Forecast, 2006-2010
Millions (in constant 1997 dollars)

Funding Source	County						
	Imperial	Los Angeles	Orange	Riverside	San Bernardino	Ventura	Total
Local Sources							
1 TDA	$11.8	$1,235.7	$436.8	$231.7	$260.9	$105.8	$2,282.6
2 Local Sales Tax	20.9	4,894.2	1,087.8	281.5	383.6	0.0	6,668.0
3 Farebox	1.0	1,715.2	263.2	82.8	115.9	24.2	2,202.4
4 Local Agency Funds [1]	0.0	5.0	768.0	0.0	0.0	0.0	773.1
5 Miscellaneous Funds [2]	0.0	187.0	198.1	9.6	15.8	9.2	419.7
Subtotal	33.7	8,037.2	2,753.9	605.6	776.2	139.3	12,345.8
State Sources							
6 STIP, Regional	28.6	445.0	129.6	113.8	122.2	69.1	908.4
7 STIP, Interregional	6.7	93.6	24.3	33.6	71.6	23.9	253.7
8 Traffic Congestion Relief	1.2	42.0	0.0	4.2	30.2	0.0	77.6
9 STA	0.8	102.5	20.8	4.1	12.3	5.1	145.6
10 TP&D/Prop. 116	0.0	0.0	87.4	0.0	0.0	0.0	87.4
11 SHOPP/O&M	49.5	243.8	48.6	84.0	265.1	82.2	773.0
Subtotal	86.9	926.8	310.7	239.6	501.4	180.4	2,245.8
Federal Sources							
12 RSTP	4.1	213.6	55.8	49.1	60.9	25.3	408.8
13 CMAQ	0.0	195.8	73.5	43.3	54.9	25.7	393.3
14 Local Assistance [3]	2.0	52.5	16.0	12.5	16.6	18.8	118.4
15 Sec. 5309	0.0	247.7	500.8	13.5	20.4	2.6	785.0
16 Sec. 5307 [4]	0.6	488.7	96.3	34.2	47.5	29.8	697.2
Subtotal	6.7	1,198.4	742.5	152.5	200.4	102.2	2,402.7
Total	$127.3	$10,162.4	$3,807.1	$997.8	$1,477.9	$421.9	$16,994.4
Percent of Total	0.7%	59.8%	22.4%	5.9%	8.7%	2.5%	100%
Grand Total							$16,994.4

Notes:

[1] Includes Orange County Gasoline Tax Fund and TCA public toll road user revenues; and local contributions to committed programs.

[2] Includes transit advertisement and auxiliary revenues, lease revenues and interest and investment earnings.

[3] Includes programs such as Regional Transportation Enhancements, Highway Bridge Rehab., Grade Crossings and Hazard Elimination. Also includes Federal High Priority Projects for the region, other federal funds for specific projects (e.g. Alameda Corridor) and MTA clean fuels program.

[4] Includes Section 5311 (rural operating) funds for Imperial and Riverside Counties.

Revenue Forecast for SCAG 2001 RTP
County by County 5-Year Incremental Forecast, 2011-2015
Millions (in constant 1997 dollars)

	County						
Funding Source	Imperial	Los Angeles	Orange	Riverside	San Bernardino	Ventura	Total
Local Sources							
1 TDA	$11.2	$1,344.2	$619.9	$244.6	$280.0	$114.8	$2,614.6
2 Local Sales Tax	0.0	5,323.3	0.0	0.0	0.0	0.0	5,323.3
3 Farebox	0.9	1,722.0	302.6	134.0	148.8	25.5	2,333.8
4 Local Agency Funds [1]	0.0	5.5	451.3	0.0	0.0	0.0	456.8
5 Miscellaneous Funds [2]	0.0	186.5	218.5	12.2	17.5	11.9	446.7
Subtotal	12.1	8,581.4	1,592.4	390.8	446.3	152.2	11,175.1
State Sources							
6 STIP, Regional	25.6	295.1	95.5	78.4	84.1	61.9	640.7
7 STIP, Interregional	6.0	64.4	17.9	23.1	49.3	21.4	182.2
8 Traffic Congestion Relief	0.0	0.0	0.0	0.0	0.0	0.0	0.0
9 STA	0.7	85.6	20.6	3.3	10.1	4.6	124.9
10 TP&D/Prop. 116	0.0	0.0	0.0	0.0	0.0	0.0	0.0
11 SHOPP/O&M	44.3	188.8	35.8	57.8	182.5	73.6	582.8
Subtotal	76.7	633.9	169.8	162.6	326.0	161.6	1,530.6
Federal Sources							
12 RSTP	3.8	152.4	39.9	35.1	43.5	23.4	298.0
13 CMAQ	0.0	69.6	52.5	30.9	39.2	23.8	215.9
14 Local Assistance [3]	1.9	37.5	11.4	8.9	11.8	17.4	89.0
15 Sec. 5309	0.0	192.0	207.2	10.7	16.2	2.1	428.1
16 Sec. 5307 [4]	0.6	387.5	76.4	27.1	37.7	27.6	556.8
Subtotal	6.3	839.0	387.3	112.7	148.4	94.2	1,587.9
Total	$95.0	$10,054.3	$2,149.5	$666.1	$920.7	$408.0	$14,293.6
Percent of Total	0.7%	70.3%	15.0%	4.7%	6.4%	2.9%	100%
Grand Total							$14,293.6

Notes:

[1] Includes Orange County Gasoline Tax Fund and TCA public toll road user revenues; and local contributions to committed programs.

[2] Includes transit advertisement and auxiliary revenues, lease revenues and interest and investment earnings.

[3] Includes programs such as Regional Transportation Enhancements, Highway Bridge Rehab., Grade Crossings and Hazard Elimination. Also includes Federal High Priority Projects for the region, other federal funds for specific projects (e.g. Alameda Corridor) and MTA clean fuels program.

[4] Includes Section 5311 (rural operating) funds for Imperial and Riverside Counties.

Revenue Forecast for SCAG 2001 RTP
County by County 5-Year Incremental Forecast, 2016-2020
Millions (in constant 1997 dollars)

Funding Source	County						
	Imperial	Los Angeles	Orange	Riverside	San Bernardino	Ventura	Total
Local Sources							
1 TDA	$10.7	$1,479.8	$687.0	$256.7	$293.8	$124.6	$2,852.5
2 Local Sales Tax	0.0	5,860.6	0.0	0.0	0.0	0.0	5,860.6
3 Farebox	0.8	1,724.0	317.4	218.3	192.2	27.0	2,479.6
4 Local Agency Funds [1]	0.0	6.1	397.3	0.0	0.0	0.0	403.4
5 Miscellaneous Funds [2]	0.0	186.6	215.2	14.0	18.5	13.7	448.0
Subtotal	11.4	9,257.1	1,616.9	488.9	504.6	165.3	12,044.1
State Sources							
6 STIP, Regional	23.4	254.6	91.0	71.6	76.9	56.6	574.0
7 STIP, Interregional	5.5	58.9	17.1	21.1	45.0	19.6	167.2
8 Traffic Congestion Relief	0.0	0.0	0.0	0.0	0.0	0.0	0.0
9 STA	0.7	79.1	22.5	3.0	9.1	4.2	118.7
10 TP&D/Prop. 116	0.0	0.0	0.0	0.0	0.0	0.0	0.0
11 SHOPP/O&M	40.5	189.0	34.1	52.8	166.8	67.3	550.5
Subtotal	70.1	581.6	164.6	148.6	297.9	147.6	1,410.4
Federal Sources							
12 RSTP	3.5	141.0	36.9	32.4	40.2	21.6	275.6
13 CMAQ	0.0	64.3	48.5	28.6	36.2	22.0	199.7
14 Local Assistance [3]	1.7	34.7	10.5	8.3	11.0	16.1	82.3
15 Sec. 5309	0.0	181.8	171.7	9.9	15.0	1.9	380.2
16 Sec. 5307 [4]	0.6	358.4	70.6	25.0	34.8	25.5	514.9
Subtotal	5.8	780.1	338.3	104.2	137.2	87.1	1,452.7
Total	$87.3	$10,618.8	$2,119.8	$741.7	$939.7	$400.0	$14,907.2
Percent of Total	0.6%	71.2%	14.2%	5.0%	6.3%	2.7%	100%
Grand Total							$14,907.2

Notes:

[1] Includes Orange County Gasoline Tax Fund and TCA public toll road user revenues; and local contributions to committed programs.

[2] Includes transit advertisement and auxiliary revenues, lease revenues and interest and investment earnings.

[3] Includes programs such as Regional Transportation Enhancements, Highway Bridge Rehab., Grade Crossings and Hazard Elimination. Also includes Federal High Priority Projects for the region, other federal funds for specific projects (e.g. Alameda Corridor) and MTA clean fuels program.

[4] Includes Section 5311 (rural operating) funds for Imperial and Riverside Counties.

Revenue Forecast for SCAG 2001 RTP
County by County 5-Year Incremental Forecast, 2021-2025
Millions (in constant 1997 dollars)

Funding Source	County						
	Imperial	Los Angeles	Orange	Riverside	San Bernardino	Ventura	Total
Local Sources							
1 TDA	$8.0	$1,290.6	$606.1	$214.4	$245.5	$107.3	$2,471.9
2 Local Sales Tax	0.0	5,111.5	0.0	0.0	0.0	0.0	5,111.5
3 Farebox	0.6	1,646.2	342.0	357.6	251.0	28.8	2,626.2
4 Local Agency Funds [1]	0.0	5.3	300.9	0.0	0.0	0.0	306.2
5 Miscellaneous Funds [2]	0.0	144.6	170.5	11.9	15.1	11.7	353.8
Subtotal	8.7	8,198.2	1,419.5	584.0	511.6	147.8	10,869.7
State Sources							
6 STIP, Regional	16.4	178.2	69.6	50.1	53.8	39.6	407.9
7 STIP, Interregional	3.9	41.2	13.1	14.8	31.5	13.7	118.2
8 Traffic Congestion Relief	0.0	0.0	0.0	0.0	0.0	0.0	0.0
9 STA	0.5	59.0	19.3	2.2	6.7	3.1	90.8
10 TP&D/Prop. 116	0.0	0.0	0.0	0.0	0.0	0.0	0.0
11 SHOPP/O&M	28.3	149.7	26.1	37.0	116.8	47.1	405.0
Subtotal	49.1	428.1	128.1	104.1	208.8	103.5	1,021.8
Federal Sources							
12 RSTP	2.6	105.1	27.5	24.2	30.0	16.1	205.5
13 CMAQ	0.0	47.9	36.2	21.3	27.0	16.4	148.8
14 Local Assistance [3]	1.3	25.9	7.9	6.2	8.2	12.0	61.3
15 Sec. 5309	0.0	130.3	3.0	7.4	11.2	1.4	153.3
16 Sec. 5307 [4]	0.4	267.2	52.7	18.7	26.0	19.0	383.9
Subtotal	4.4	576.4	127.2	77.7	102.3	64.9	952.8
Total	$62.1	$9,202.7	$1,674.7	$765.8	$822.8	$316.2	$12,844.3
Percent of Total	0.5%	71.6%	13.0%	6.0%	6.4%	2.5%	100%
Grand Total							$12,844.3

Notes:

[1] Includes Orange County Gasoline Tax Fund and TCA public toll road user revenues; and local contributions to committed programs.

[2] Includes transit advertisement and auxiliary revenues, lease revenues and interest and investment earnings.

[3] Includes programs such as Regional Transportation Enhancements, Highway Bridge Rehab., Grade Crossings and Hazard Elimination. Also includes Federal High Priority Projects for the region, other federal funds for specific projects (e.g. Alameda Corridor) and MTA clean fuels program.

[4] Includes Section 5311 (rural operating) funds for Imperial and Riverside Counties.